USING U-PB DATING OF DETRITAL ZIRCONS TO DETERMINE MAJOR ICE STREAM FLOW HISTORY IN THE WEDDELL SEA EMBAYMENT, ANTARCTICA

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Liana Marie Agrios

Using U-Pb dating of detrital zircons to determine major ice stream flow history in the Weddell Sea Embayment, Antarctica

Tills from major ice streams (Institute, Foundation, Academy, Recovery, and Slessor) of the Weddell Sea Embayment contain detrital zircons with distinct U-Pb age populations that can be used as a provenance tool to better understand ice stream dynamics. U-Pb ages of detrital zircons were measured in 21 samples of onshore till, erratics, and bedrock of potential source rocks, and 12 samples of offshore till. Grains were analyzed by LA-ICPMS at the University of Arizona (n=5447). Relative probability U-Pb age density plots of till in moraines along the Institute Ice Stream have dominant Grenville (1070 Ma) and secondary Ross/Pan-African peaks (560 Ma, 630 Ma). The Foundation and Academy show prominent Ross/Pan-African peaks (500-530 Ma and 615-650 Ma). The Recovery transports zircons with prominent 530 Ma and 635 Ma peaks along the southern margin, and 1610 and 1770 Ma along the northern margin. The Slessor carries zircons with prominent populations at 1710 Ma and secondary 2260-2420 Ma.

U-Pb ages in zircons from offshore till samples show a general trend of fewer Mesozoic ages from west to east. The western most core, PS 1423, has dominant Jurassic populations while cores 1197 and 1278 have a high proportion of early Ross/Pan-African ages relative to Grenville ages. The similar zircon age distributions between PS 1278 and the Foundation Ice Stream tills suggest that the Foundation switched to an easterly flow path around Berkner Island (BI) at some point during the LGM. In the eastern Weddell Sea (PS 1400), there was a near absence of Proterozoic zircon age populations carried by

the Slessor and northern side of the Recovery. Another unexpected find was a lack of Grenville ages in PS 1423 relative to the Institute tills.

The U-Pb data in this study provides a basis for two possible LGM ice flow reconstructions. In the first, the Institute flowed west around the unnamed isolated bedrock highs, deposited tills between PS 1423 and PS 1197, providing a westerly flow path around BI for the Foundation. In the second, the Institute flows over the subglacial topography and deposited till closer to PS 1197, forcing the Foundation east around BI.

Kathy J. Licht, PhD, Committee Chair

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Introduction

The Antarctic Ice Sheet (AIS) has immense potential to affect global sea level rise, however, a great deal of uncertainty surrounds how the ice sheet will respond to rising temperatures. One of the most poorly understood responses is the future mass loss of ice from the continent (Moore et al., 2013). Consequently, attention has been focused on the West Antarctic Ice Sheet (WAIS) because this is where most of the mass from the continent is currently being lost and has long been predicted as being susceptible to collapse (Mercer, 1978; Wingham et al., 2006). The Weddell Sea Embayment (WSE) is of particular interest because glaciers, ice streams and ice shelves flowing into the WSE drain about one fifth of Antarctica's continental ice volume (Hillenbrand et al., 2014) and it is one of the main formation sites for Antarctic Bottom Water, the coldest and densest water in the oceans that is a key driver of global ocean currents (Hillenbrand et al., 2014). Despite the impact that changes in the WSE ice can have on the sea level budget and global ocean current circulation, this region can arguably be considered as one of the least well-studied sectors of the continent (e.g., Sugden et al., 2006; Wright et al., 2008).

It is important to improve our current state of knowledge of the WSE's response to future climatic conditions because changes in this sector, specifically in ice shelves along the coast, can alter the mass balance of the continent and have repercussions extending up into areas where more ice is stored. Accelerated glacier discharge is already occurring in West Antarctica. Over the past 40 years, the Amundsen Sea Embayment has experienced a 77% increase in total ice discharge likely because its buttressing ice shelves are melting and grounding line positions of many glaciers are retreating

(Mouginot et al., 2014). Mercer (1978) first proposed the marine ice sheet instability hypothesis and argued that since the WAIS is grounded below sea level and sits on a bed with a reverse slope, it is inherently unstable and subject to rapid disintegration if ice shelves that buttress the discharge of inland ice are compromised. The Ronne Ice Shelf is fed by the WAIS, receives discharge from numerous ice streams including the Institute and Foundation, and is susceptible to such a scenario given its reverse-slope bed topography (Figure 1a).

Although the Filchner Ice Shelf is a part of East Antarctica and drains ice from the Foundation, Recovery, and Slessor Ice Streams, climate modeling suggests that this ice shelf is also susceptible and could potentially be weakened by ocean warming (Golledge et al., 2016). Given that both the Ronne and Filchner ice shelves buttress major ice streams in the WSE, learning more about the future fate of ice stream drainage basins is imperative.

Sparse datasets have been the primary obstacle to uncovering the past and modern behavior of the WSE. As a result, ice sheet reconstructions over the past 20,000 years show major discrepancies leading to varying estimations of sea level equivalent volume of LGM ice sheet buildup ranging from 1.4-3 m to 13.1-14.1 m. (Bassett et al., 2007; Le Brocq et al., 2011). The lack of agreement between marine and terrestrial data have led to two disparate primary models for ice sheet extent and grounding line position in the WSE during this time: (1) a grounding line that extended to the continental shelf break, which resulted in a thick ice sheet that covered the entire continental shelf (Huybrechts, 2002; Bassett et al., 2007; Pollard and Deconto, 2009; Golledge, 2012) or (2) one similar to present-day or covered by a thin ice sheet that grounded across only the shallower parts

of the continental shelf, leaving the grounding line in a position of minor advance relative to today (Bentley et al., 2010; LeBrocq et al., 2011; Whitehouse et al., 2012). There is undoubtedly a need to constrain behavior of the ice sheet in this region to facilitate improvement of LGM to Holocene reconstructions, and to more accurately predict how the WSE, and the AIS as a whole, will respond to warming temperatures. Since the ice sheets severely limit direct sampling of sediment that can be used to reconstruct ice history, multi-proxy provenance studies are employed to maximize what can be learned from available glacial sediments (Licht and Hemming, 2017). Provenance studies using onshore till deposited in moraines, offshore till, and ice-rafted sediments can help further deduce past ice flow paths, as well as periods and sources of maximum iceberg production. Previous provenance work on till and glacial marine deposits in the Weddell Sea has mainly utilized heavy mineral assemblages, $^{40}Ar/^{39}Ar$ ages of detrital minerals, and Sm-Nd isotopes (e.g., Diekmann and Kuhn, 1999, Roy et al., 2007).

Provenance work is more developed in the Ross Sea sector than the WSE because of its relative accessibility, higher proportion of exposed rock, and greater number of seafloor cores. U-Pb dating of zircons in glacial tills, in particular, has led to many advances in understanding ice sheet history. For instance, detrital zircon geochronology facilitated differentiation between sediments deposited beneath ice flowing from East and West Antarctica (Licht et al., 2014). A combination of sand petrography and U-Pb zircon geochronology from tills was used to reconstruct the LGM ice flow path for the major outlet, Byrd Glacier (Licht and Palmer, 2013). The addition of zircon as a provenance tracer has helped create more dependable models of Ross ice sheet configurations during the LGM (Golledge et al., 2013), and ultimately of the sector's response to future climate

change. Thus, it would be beneficial to adopt a similar approach in the WSE and add zircon to current provenance techniques.

This paper reports results from a study of detrital zircons from onshore and offshore tills from the WSE used to fingerprint detritus transported by the Institute, Foundation, Academy, Recovery, and Slessor Ice Streams (Figure 1). Since till was absent from the Evans, Rutford, and Support Force Ice Streams, zircon ages from these locations are not included in this study. Fingerprints from till can reveal new tracers for the WAIS, discriminate ice flowing from East and West Antarctica, and provide a window into the composition of hidden subglacial geology.

Geologic Setting and Background

Antarctica contains scattered exposed bedrock along the Transantarctic Mountains (TAM) that act as the divide between East and West Antarctica. In the WSE, they include the Pensacola Mountains, the Whichaway Nunataks, and the Shackleton Range (Figure 2). The other prominent bedrock exposure in the WSE is the Ellsworth Mountains, which are roughly orthogonal to the Transantarctic Mountains (Figure 2.) The northern most part of the continent, the Antarctic Peninsula, also contains bedrock exposures. The contrasting bedrock geology and structural histories of East and West Antarctica and the Antarctic Peninsula influence the composition of till that the major ice streams transport and the bedrock topography influences preferred ice flow pathways.

The Ellsworth Mountains are a major range in the catchment of the Institute Ice Stream and are composed of 13,000 m of Cambrian-Permian sediments on a Grenville-age basement (Figure 1c) (Craddock et al., 2016). Further to the east, most of the rock exposures in the Institute Ice Stream are isolated nunataks of Grenville age or are Jurassic granitic intrusions formed from the breakup of Gondwana. West Antarctica adjoins to the East Antarctic craton and is separated by the Transantarctic Mountains, which record both the major Grenville (1300 – 900 Ma) and Ross-Pan/African (680-480 Ma) orogenic events. These episodes of plutonism and deformation had a variable impact on different regions of the TAM and are reflected in the zircons of these rocks (Collinson et al., 1994).

The southernmost part of the TAM in this study is the Pensacola Mountains, which are situated inland from the southern coast of the Ronne-Filchner Ice Shelf. The

mountain range is about 375 km long, and contain a late Neoproterozoic to late Paleozoic sedimentary and magmatic succession (Figure 1c) (Stump, 1995; Storey et al., 1996; Rowell et al., 2001). The Foundation and Academy Ice Streams cut through the Pensacola Mountains. Further east, the Whichaway Nunataks, which outcrop along the southern margin of the Recovery Glacier (Figure 2c), expose the sandstone-dominated Whichaway Formation of the Beacon Supergroup with basaltic intrusions (Stephenson, 1966). On the north side of the Recovery Glacier, the Shackleton Range is devoid of the Beacon Supergroup and contains eroded basement rocks (Sugden et al., 2014). These east-west oriented mountains extend for about 170 km and have contrasting north-south bedrock geology consisting of late Proterozoic to Carboniferous sediments resting on the Precambrian igneous and metamorphic rocks of the Shackleton Range Metamorphic Complex (Figure 1d) (Clarkson, 1972). In contrast, the Antarctic Peninsula is composed of sedimentary rocks of Late Paleozoic and Early Mesozoic age, volcanic and plutonic rocks of Mesozoic age, and basaltic and volcaniclastic rocks of Late Cenozoic age (Faure and Mensing, 2010).

The bedrock of the Transantarctic and Ellsworth Mountains has been eroded into overdeepend troughs along preexisting fluvial valleys; this is where present-day ice streams now flow (Hein et al., 2011; Sugden et al., 2014). The Slessor and Recovery Glaciers flow in troughs as deep as 2000 m below sea level on the north and south sides of the Shackleton Range (Figure 1a) and are thought to have been confined to their current configuration for at least the past 14 Ma (Sugden et al., 2104). The modern Foundation Ice Stream follows a trough around the western margin of the Pensacola Mountains and as it enters the Ronne Ice Shelf, it flows west of Berkner Island. The

Foundation Ice Stream drains ice from both West and East Antarctica, and has been postulated by Whitehouse et al. (2017) to have switched to an easterly flow path around Berkner Island during the last glacial advance. Downstream, the Thiel/Crary Trough exceeds depths of 1500 m below sea level to the east of Berkner Island (Figure 1). The Institute Ice Stream flows through the Ellsworth Trough tributary and Robin Subglacial Basin, which are thought to be stable and ancient (Siegert et al., 2016). The ice streams currently terminate in grounding lines on the inner Weddell Sea continental shelf. The shelf, which contains three main landward dipping seafloor troughs (Figure 1), is where the 'offshore' tills analyzed for this study were deposited by expanded, grounded ice during the LGM (Hillenbrand et al., 2012).

Although onshore and offshore evidence around the continent indicate that ice streams expanded and thickened in their respective subglacial troughs during the LGM, the extent of grounding lines and changes in ice thickness in the WSE are not well understood (Bentley, 1999). Areas of the ice sheet that are thought to have experienced thickening are around the Ellsworth and Pensacola Mountains. Cosmogenic surface exposure ages from the last glacial maximum suggest thickening of 230-480 m in the Ellsworth Mountains, and 400-500 m in the Thomas and Williams Hills (Bentley et al., 2010; Balco et al., 2016). In the Shackleton Range, LGM surface exposure ages were found only at or near the modern ice margin, indicating the Slessor and Recovery Glaciers were not significantly thicker than today (Hein et al., 2011). Hein et al. (2011) only reported potential minimal thickening of 100 m at Mt. Provender in the Shackleton Range. This relatively minor ice sheet build-up in the eastern WSE (e.g., Hillenbrand et al., 2014; Hein et al., 2011), is perplexing given that the mouth of outlet glaciers in the

Ross Sea sector experienced up to 1000 m of LGM thickening (Hall et al., 2013). Currently, evidence does not provide consistent thickening estimates across the WSE and does not clearly resolve the position of the grounding line during the LGM.

Sample Location and Methods

This study used a combination of onshore and offshore till samples, pebbles, erratics and bedrock samples to characterize, or "fingerprint," sediment from major ice streams (Tables 1, 2 and 4). Offshore till samples located on the continental shelf in front of the Ronne and Filchner Ice Shelves are from four cores collected by the German *Polarstern* research vessel and described in Haase (1986) and Hillenbrand et al. (2012). In 2014, 22 onshore till samples were collected from moraines in the Patuxent Range adjacent to the Foundation Ice Stream (FIS) (Figure 2b-c), in the Neptune Range adjacent to the Academy Glacier (Figure 2b), and at the Whichaway Nunataks and Shackleton Range adjacent to the Recovery Glacier (Figure 2d) (Table 1). The site of an additional till sample in the Shackleton Range adjacent to the Slessor Glacier is described in Hein et al. (2011). R. Vieira (Brazilian Antarctic Program) provided till samples collected in 2008-09 from the Patriot Hills, Independence Hills, and Rivera Moraine of the eastern Ellsworth Mountains (Figure 2e). These samples were utilized to help characterize detrital zircons from the Institute Ice Stream. The onshore till samples were prepared for a suite of analyses: pebble lithology, U-Pb dating of detrital zircons, and particle size analysis. The offshore till samples were prepared for U-Pb dating of detrital zircons.

Pebbles representative of local and exotic lithologies were sampled from moraines at 19 of 22 sites sampled in 2014 (Table 1). At these sites, $1m^2$ areas were selected and all pebbles on that surface were photographed and collected. More than 2200 pebbles were classified based on lithology using characteristics given in Table 3. After pebble collection, 1 kg of till was collected after removing the top 3-5 cm to avoid particle

biasing due to wind deflation. Cobbles with local and exotic lithologies were also collected from some sites. Bedrock samples of the Patuxent Formation in the Patuxent Range, and from the Devonian sandstone at Brazitis Nunatak were collected and zircons were analyzed (Table 2).

U/Pb analysis of detrital zircons

Eleven onshore till samples were selected for U-Pb dating of detrital zircons in the 63-150 μm size range to characterize the ice streams: 7 are adjacent to the Foundation Ice Stream, 1 is adjacent to the Academy Glacier, 2 are adjacent to the Recovery, and 1 is adjacent to the Slessor (Table 1). Zircons in tills collected from the eastern Ellsworth Mountains were analyzed previously and the data are used in this study (Licht, personal communication). Ten common, exotic, and bedrock clasts were chosen for U-Pb analysis to compare age populations in till to help distinguish local input versus more distal subglacial sources (Table 2) (Appendix A). Altogether, 21 samples were prepared for U-Pb dating of zircons.

For onshore samples, U and Pb isotopic compositions were analyzed for 19 detrital samples (till or sedimentary rock) and 2 igneous cobbles. The 11 till samples were sieved to 63-150 μm, and the 10 pebble and cobble samples were crushed, pulverized, and sieved to 63-150 μm as well. The 63-150 μm fraction of these 21 samples was sent to the Arizona LaserChron Center for heavy liquid mineral separation and magnetic separation via Frantz Magnetic Separator. Once separated, the zircons of unknown age, R33, FC, and Sri Lankan (SL) standards of known age and isotopic composition were mounted onto a 1-inch diameter epoxy puck and polished to half the grain thickness (Gehrels, 2012). We used a scanning electron microscope (SEM) to

acquire backscatter-electron (BSE) images of the detrital zircons to avoid potential cracks or inclusions, and cathodoluminescence (CL) images to identify zonation in the zircons from igneous samples. A total of 4,680 detrital zircons and 52 zircons from igneous clasts were measured.

Tills in offshore samples were sampled from gravity and box cores collected by the *Polarstern* during three German Antarktis expeditions from 1983-1986: ANT-II/4, ANT-III/3 and ANT-IV/3 (Table 4). The zircons were extracted from 1-2 cm sections described as subglacial till by Hillenbrand et al. (2012), Crawford et al. (1996), Wessels (1989), Melles (1987, 1991), and Haase (1986). Sections were chosen based on the following properties that suggest a subglacial origin: poor sorting, high shear strength, low water content, high compaction, and low organic carbon content. Tills are presumed to represent LGM deposition based on their stratigraphic position.

Till from cores PS 1400-1, PS 1197-2, PS 1216-1, PS 1278-1 and PS 1423-2 was separated into 63-125 μm and 125-250 μm size fractions to maximize the number of measurements and assess whether grain size influenced zircon abundance. Heavy liquid mineral separation was done at Lamont-Doherty Earth Observatory using the heavy liquid lithium heteropolytungstate (LST) and Methylene Iodide. Individual zircons were hand-picked and mounted onto copper tape on the surface of 1-inch diameter epoxy pucks in the IUPUI Sedimentology Laboratory (Appendix B). Zircons were mounted on the surface of copper tape and were not polished to allow easy removal for use in future analyses. Element maps and backscattered-electron (BSE) images were taken at the University of Illinois at Urbana-Champaign on the SEM. The samples and images were sent to Arizona LaserChron Center to be analyzed; U-Pb of 715 zircons were measured.

For U-Pb dating, large n-datasets provide a higher probability that low abundance fractions are identified, and the measured age distribution will be closer to the true age distribution (Pullen et al., 2014). For onshore samples, three hundred zircons per sample (n=300) were analyzed when possible. N = 300 was not possible in offshore samples due to the small sample sizes, however all zircons in each sample were analyzed. Zircons were ablated with the single collector Element 2 using LA-ICPMS (laser ablation inductively coupled plasma mass spectrometry) that creates a pit 20 μm in diameter and ~15 μm deep. Standards of known age and isotopic composition, R33, FC, and SL were also placed on the mounts with the unknown zircons for calibration and correction purposes. This method of standard-sample bracketing yields accuracy of 1-2% (2-sigma standard deviation) (Gehrels, 2012). The dating approach described by Gehrels et al. (2006) was used. $^{207}Pb/^{235}U$ is not measured directly but is instead calculated from measured $^{206}Pb/^{238}U$, measured $^{206}Pb/^{207}Pb$, and known $^{238}U/^{235}U$ (Gehrels, 2010). Common Pb correction was done by using the measured ^{204}Pb and assuming Pb compositions from Stacey-Kramers (1975). ET_Redux was used for data reduction. Interpreted ages are based on $^{206}Pb/^{238}U$ for grains that are younger than 1.0 Ga, and on $^{206}Pb/^{207}Pb$ for grains that are older than 1.0 Ga (Gehrels et al., 2008). Any analyses that are >30% discordant or >5% reverse discordant are not considered.

Interpretations are based on analyses that belong to a cluster of three or more overlapping analyses because this is representative of a significant age population in detrital samples (Gehrels, 2010) (Appendix C). Relative-age probability plots were created in Isoplot 4.15. Interpreted ages were also analyzed using Kernel Density Estimation (KDE), the Kolmogorov-Smirnov test (K-S test) at a level of 95% confidence,

and the Overlap-Similarity Comparison test. In the KS test, ages in the Foundation Ice Stream were split in half (Foundation 1 and Foundation 2) because the number of grains exceeded the program's capacity.

Particle size analysis

The 11 onshore samples were characterized using particle size analysis with the Malvern Mastersizer 2000 Laser Particle Size Analyzer in the IUPUI Sedimentology Lab. In preparation for particle size analysis, till samples were freeze dried, dry sieved to <1000 μm, treated with H_2O_2 to remove organic matter, wet sieved to remove any remaining organic matter or unwanted material, placed in a centrifuge for 15 minutes, and then dispersed in 20 mL of sodium metaphosphate. During analysis, each sample was measured (percent by volume) 3 times and averaged. The clay, silt, and sand-sized content were calculated and are reported in Table 5.

Results

Pebbles

Foundation Ice Stream

The pebble lithology data for the Foundation Ice Stream (Tables 3 and 6) show compositions dominated by brown and gray metasandstones and sandstones of varying colors, which comprise 80-90% of pebbles at most sites. Most of the gray metasandstones are similar in composition to the gray fine-medium grained metasandstones of the Patuxent Formation bedrock sampled from Mt. Yarborough in the Thomas Hills. In addition, shale and slate make up between 1-8% of most samples. White, pinkish white, red, and tan sandstones are similar to those found in Academy Glacier deposits, however the colors are not as varied as sandstones in LIC and LIC2. In addition, white is the most common color and comprises over 40% of all sandstones. Limestones and igneous rocks typically comprise 0.5-7% and 0.5-2.5% of pebbles respectively, with site HEM having the highest percentage of igneous rocks at nearly 7%. Compositions found exclusively in these deposits and the Academy Glacier deposits include porphyries, quartzites, and quartz veins.

Academy Glacier

The most prevalent compositions found in Academy Glacier tills on the north side of the ice stream (LIC and LIC2) are metasandstones, sandstones, granitic rocks, and porphyries (Tables 3 and 6). At both sites, an average of 25% of the sample is metasandstone that varies in color, while 60% is sandstones with more variety in color than any other ice stream (Table 6). Reddish-purple, purple, pinkish white, and white are

among the most common colors and comprise almost 50% of both sites. Between 8-10% of deposits are igneous and include intermediate to mafic, and felsic compositions. The majority of the igneous rocks are porphyritic and are more common than at any other pebble site. Pebbles from the south side of Academy Glacier (sample WEB) are nearly 90% metasandstone, and largely resemble the local Patuxent Formation.

Recovery Glacier

The pebble lithology data for the Stephenson Bastion (STB, STB2) and Whichaway Nunataks sides (WAW, WAW2) of the Recovery Glacier are distinctly different from each other and are also different from the Foundation and Academy Ice Stream samples (Tables 5 and 6). Stephenson Bastion pebbles are primarily greenschists (60%) and metasandstones (40%) of varying colors, and have the highest percentage of rocks categorized as low/intermediate-grade metamorphic rocks of phyllite and schist. At both STB and STB2, greenschists are similar to the lithology of the Turnpike Bluff Group bedrock described by Faure and Mensing (2010). In contrast, WAW and WAW2 are distinguished by limestones and mafic igneous rocks, which are more prevalent than at any other pebble site, though vary between sites (Table 6). Limestone comprises nearly 20% of pebbles at WAW2 and 6% at WAW and mafic igneous rocks comprise 28% of WAW pebbles. At both sites, 13-28% are sandstones that are similar to the lithology of the Beacon Supergroup bedrock described by Brewer (1989). At both WAW sites, metasandstones comprise nearly 30% of pebbles.

Particle size analysis

Shackleton Range and Whichaway Nunatak samples have more sand (<70%) and less clay size grains relative to the Pensacola Mountains samples (Table 5). In the Foundation tills (Patuxent Range), sand is the most variable of the size fractions and spans 30% to 81%. The percentage of silt is mostly within the range of 18% to 26%. Some sites where two samples were taken show >20% variability in size fractions between the two samples. The largest differences occur between MAM and MAM2, LIC and LIC2, and STB and STB2 (Table 5).

U-Pb analysis of onshore detrital zircons

Onshore Bulk Till Overview

Altogether, 4,680 detrital and 52 igneous zircons from the onshore bulk till samples and rock samples were analyzed (Appendix D). Of these 4,732 zircons, 2,873 are from the Foundation Ice Stream (1763 till, 1099 rocks), 766 are from the Academy Glacier (291 till, 468 rocks), 861 are from the Recovery Glacier (534 till, 327 rocks), and 250 (till) are from the Slessor Glacier. Three hundred and fifty-one zircons from preexisting data in the eastern Ellsworth Mountains are associated with the Institute Ice Stream. Dominant age populations were revealed by the AgePick program. Kernel Density Estimations were compared to probability density plots to evaluate dominant age populations and are shown in Appendix E. K-S test and Overlap-Similarity Comparison test results are shown in Appendices F and G.

Onshore Ice Stream Fingerprints

Of the four major ice streams studied (Institute, Foundation, Recovery, and Slessor) each has a unique zircon population fingerprint (Figure 3). Since the Academy

Glacier flows into the Foundation Ice Stream and has similar zircon peak ages, it is combined with the Foundation in this section. However, the Academy Glacier is discussed separately in other sections as it has notable distinctive features. Two zircon ages commonly referred to are Grenville (900-1300 Ma) and the Ross/Pan-African (480-680 Ma) orogenies that left their signature on zircons during mountain building events. Grenville refers to the Neoproterozoic assembly of Rodinia between 1300 – 900 Ma and is associated with the mountain building event known as the Grenville Orogeny (Goodge et al., 2010). Ross/Pan-African refers to a period during the formation of Gondwana (~480-680 Ma) including the Neoproterozoic Pan-African Orogeny and the Cambrian-Ordovician Ross Orogeny (Fitzgerald, 2002; Veevers, 2003).

The Institute Ice Stream zircon ages are bimodal and are characterized by a low proportion of Ross/Pan-African ages (480-680 Ma) relative to Grenville (900-1300 Ma) ages (Figure 3a). Although the peak ages of the Foundation Ice Stream tills are similar to the Institute, the proportions of Ross/Pan-African to Grenville are opposite. Additionally, slightly younger ages characterize the Ross/Pan-African peak in the Foundation Ice Stream tills (Figure 3b). Tills from the southern margin of the Recovery Glacier also have a high proportion of Ross/Pan-African ages, a much smaller Grenville population, and a high proportion of Paleoproterozoic ages (peaks at 1610 Ma, 1770 Ma) (Figure 3c). The Slessor Glacier till is characterized by the oldest zircon ages that range from the Archean to Proterozoic and lacks a dominant Ross/Pan-African peak. Significant age populations older than 2 Ga are only found in the Slessor Glacier till and are thus this ice stream's distinctive fingerprint (Figure 3d). In addition, 22% of zircons in Slessor till have Th-U ratios <0.1, indicating a metamorphic origin according to Rubatto (2002). All other ice

streams transport zircons with Th-U ratios that are >0.1, pointing towards a magmatic origin.

Ice Stream Tills and Pebbles/Cobbles

In addition to providing a unique fingerprint for each ice stream, the large number of till and rock samples analyzed from across the study area provide important information to evaluate spatial or zircon age variations within an ice stream's domain. Furthermore, the zircon age population datasets from bedrock and erratic cobbles are important in determining potential till sources.

Foundation Ice Stream

Seven onshore till samples that are adjacent to the Foundation Ice Stream were combined to produce the Foundation Ice Stream fingerprint (SIS, YAR4C, YAR2, HEM, MAM2, MOU2, and MOU). The zircon distributions across each site are similar overall, but showed some variation in the dominant age populations (Figure 4a-g; Table 1). Zircon ages range from Archean to Cambrian with dominant populations during the time of the Ross/Pan-African and Grenville orogenies. All sites have the largest peaks in the late Ross/Pan-African (<550 Ma) and secondary peaks in the early Ross/Pan-African (~560 and 640 Ma). In the FIS tills, MAR, YAR1, YAR2, YAR3, HEM, and SUY are Pleistocene in age (~1Ma) while MOU, MAM, YAR4, and SIS are Holocene (5-9 ka). The zircon distributions for these tills generally do not vary with age and have dominant late Ross/Pan-African peaks and secondary Grenville peaks (Figure 5).

Figure 4 shows that the Patuxent Formation bedrock and non-local sandstones in the till pebble fraction (h-j) share dominant zircon populations during the late Ross/Pan-African and Grenville Orogenies with secondary early Ross/Pan-African peaks, however,

the proportions are different. In the Patuxent bedrock samples, the late Ross/Pan-African peak (500-510 Ma) is higher relative to the Grenville peak than in the tills and has a much lower proportion of grains 550-650 Ma. The Brazitis Nunatak sandstone (Figure 4k), a potential upstream source of zircons, has significant peaks at 550 Ma and 595 Ma. Although the 595 Ma is not a peak in any of the FIS tills, the 550 Ma peak is seen. The porphyritic igneous rock sample, an erratic found scattered throughout the Foundation tills, has a Grenville age (1025-1080 Ma) in the zircon core, and late Ross/Pan-African ages (~515 Ma) for the rims (Figure 6f).

Academy Glacier

Overall, the onshore till along the northern margin of Academy Glacier has similar dominant and common zircon age populations to the Foundation tills, non-local sandstones in the Academy deposits, and the Patuxent Formation bedrock, but has a different distribution of ages (Figure 6a-d, g). The Academy has more of an even distribution of late and early Ross/Pan-African (505 Ma, 620 Ma) and Grenville peaks (1030-1060 Ma) relative to the Foundation tills. LIC White and LIC Red are both sandstones that are ubiquitous in the pebble fraction (Figure 4c-d) and although they share similar peaks to the Academy till, their distributions are different. The most notable observation is the shared early Ross/Pan-African peak (~630 Ma) in the Academy till and LIC White Sandstone. LIC Granite is a glacial erratic found in deposits along the Academy that has zircons with core ages of ~510 Ma (Figure 6e).

Recovery Glacier

The contrasting bedrock geology on the sides of the Recovery Glacier (Figure 1) is reflected in the dominant and common zircon ages of the till (STB, WAW) and rock

samples (STB R-8 and WAW R-9) (Figure 7). Zircons from the STB till and rock samples are primarily Proterozoic with dominant populations in the Neoproterozoic (1480 Ma) and Paleoproterozoic (1770 Ma, 1610 Ma). The WAW till has zircons that are younger than the STB till. Common populations include the Mesoproterozoic (1040 Ma), Neoproterozoic (635 Ma), and a dominant late Ross/Pan-African peak (530 Ma). The early Ross/Pan-African peaks (590, 635 Ma) in the WAW till are less pronounced in the WAW bedrock. In addition, the STB till has a small, but significant late Ross/Pan-African peak (530 Ma) that is similar to the WAW bedrock.

U-Pb analysis of offshore detrital zircons

Altogether, 715 zircons in 5 offshore cores were analyzed (Figure 8, Table 4, Appendix D). Overall, there is a general trend of decreasing Mesozoic grains in the cores from west to east and a dominance of Ross/Pan-African grains. In samples where zircons were separated into 63-125 μm and 125-250 μm size fractions, zircons were more abundant in the 63-125 μm fraction. Sample PS 1423-2, 262-264 cm yielded zircons from only the 63-125 μm fraction. Since the 13 zircons in PS 1216-1 (35-36 cm) did not yield meaningful age populations, this sample was not considered further. Kernel Density Estimations were compared to probability density plots to evaluate dominant age populations and are shown in Appendix E. K-S test and Overlap-Similarity Comparison test results are shown in Appendices F and G.

PS 1423-2, the most westerly core site, located adjacent to the Antarctic Peninsula, contains the youngest zircon age populations (Figure 8, a-b). Both depth intervals showed a dominant Early Jurassic (~180 Ma) peak and secondary Ross/Pan-African peak (~550 Ma). There are no significant populations older than Grenville ages.

In PS 1197-2, the most prominent peak is of late Ross/Pan-African ages (~540 Ma) (Figure 8c). To the east of Berkner Island, in PS 1278, the dominant age population is late Ross/Pan African (~530 Ma) with a secondary Grenville peak (~1060 Ma) (Figure 8d). Mesozoic grains are present in both cores, however their populations are not significant.

PS 1400-1 is the most easterly core site, located in front of the Filchner Ice Shelf. The 216-218 cm interval shows the largest peaks in the late Ross/Pan-African (~530 Ma, ~560 Ma), as well as secondary early Ross/Pan African (~650 Ma) and Grenville age (~1020 Ma) peaks (Figure 8e). Mesozoic populations are not significant. The 278-280 cm interval contains 58 zircons when both size fractions are combined. This sample has a dominant late Ross/Pan-African (~530 Ma) age populations with a secondary Grenville peak (~970 Ma). There are no significant populations in the early Mesozoic (~250 Ma, ~180 Ma), or older than 2 Ga (Figure 8f).

Discussion

Using provenance to ultimately trace sediment in the Weddell Sea offshore record back to Antarctica's bedrock has been carried out successfully by a number of studies. These studies have mostly used heavy minerals, hornblende, and biotite, however, zircon has been under-utilized as a tracer. Zircon is ubiquitous in the rock record, survives long transport distances and thus sedimentary cycles, and has an age that often represents the crystallization age of the magma. Therefore, it is an advantageous provenance tool.

Distinct heavy mineral assemblages of green hornblende, garnet, and clinopyroxene in the sand fraction of offshore surface sediments were linked to specific source rocks of Antarctica's interior (Diekmann and Kuhn, 1999), while combined Sm-Nd data and $^{40}Ar/^{39}Ar$ ages established a link between circum-Antarctic glacio-marine offshore sediments and the continent's main bedrock (Roy et al., 2007). A recent study by Pierce et al. (2014) used detrital U-Pb zircon, $^{40}Ar/^{39}Ar$ hornblende, and $^{40}Ar/^{39}Ar$ biotite age populations from 28 till and glacial-marine sediment core samples located around East Antarctica to constrain onshore source areas while also capturing new populations from units potentially buried by ice.

We adopt a similar approach in our use of pebble and zircon data from onshore till, and zircons in offshore cores to offer insight into LGM ice stream flow paths, identify onshore source rocks, discriminate between ice originating from West and East Antarctic, provide a window into bedrock units buried by ice, offer field evidence for glacial modeling, and establish useful chronometers for future studies.

Lithologic sources of the onshore ice stream tills

Institute Ice Stream

The bedrock in the vicinity of the Institute Ice Stream is quartzite of the upper Cambrian Frasier Ridge Formation (Heritage Group) that has peak zircon ages of 610 Ma and 1070 Ma (Flowerdew et al., 2007) (Figure 9). Bedrock ages from the Institute ice stream catchment were not directly measured for this study, however, zircons from tills collected in the Patriot, Marble, and Independence Hills display dominant late Mesoproterozoic Grenville (~1070 Ma) and secondary Ross/Pan-African (560 Ma) peaks that are consistent with results from Flowerdew et al. (2007) (Figure 3a). Additionally, the Institute tills have another secondary Proterozoic peak (~630 Ma), a low abundance of peaks older than 1120 Ma, and a presence of early Mesoproterozoic grains – common characteristics of the Frasier Ridge Formation (Flowerdew et al., 2007). U-Pb zircon data from Castillo et al. (2017) are consistent with contributions from the eastern Ellsworth Mountains Heritage Group rocks (Springer Peak, Liberty Hills and Union Glacier formations) that yielded zircons with similar dominant Grenville and secondary Ross/Pan-African peaks. Therefore, it is likely that the Frasier Ridge Formation, or bedrock from the eastern Ellsworth Mountains Heritage Group, is a dominant contributor to the tills.

The second dominant late Neoproterozoic (~560 Ma) peak in the Institute Ice Stream tills is slightly younger than what was reported from the Frasier Ridge Formation (610 Ma), therefore it is likely that some of these grains were sourced from other nearby rock units. The upper Cambrian Crashite Group Mount Twiss Member, which has a large zircon age cluster at ~568 Ma, is a potential candidate, as well as the Mount Wyatt Earp

Formation where a majority of the detrital grains yield ages between 550 Ma and 700 Ma (Flowerdew et al., 2007). Mount Woollard, an isolated outcrop of sedimentary rocks of uncertain age within the Ellsworth-Whitmore crustal block and within the Institute ice catchment, is also a potential source candidate because the most prominent zircon age population of 554 ± 2 Ma is similar to the age cluster of ~560 Ma in the Institute till (Flowerdew et al., 2007).

Foundation Ice Stream

All of the Foundation Ice Stream till samples are from the Patuxent Range, which has been mapped by Schmidt and Ford (1969) as grayish-green metasandstones of the Patuxent Formation. Rowell et al. (2001) reported U-Pb dates for zircons in the Patuxent Formation, which cluster in the late Cambrian (~500-490 Ma) and span to the Neoproterozoic (Figure 10). In addition, zircons from bedrock in the Thomas Hills analyzed in this study corroborate these age populations with dominant late Cambrian (~510Ma) and Mesoproterozoic (~1030Ma) populations. Since all 7 till samples have zircon populations with significant Ross/Pan-African and Grenville peaks, it is likely that local bedrock is contributing significantly to the Foundation Ice Stream tills. This is consistent with the pebble compositions at most till sites. Gray metasandstones comprise at least 25% of the till sites (except SUY and HEM), and average ~45% of the pebble fraction.

FIS tills have a higher proportion of ages in the early Ross/Pan-African range (650-600 Ma) and a greater proportion of Grenville grains than Patuxent bedrock, so other sources are contributing (Figure 4). White and white/pink sandstones (YAR4C and YAR4B) common in the pebble fraction have distributions similar to the tills with

dominant late Cambrian (~500Ma) and Mesoproterozoic (~1030Ma) populations, suggesting they are also a dominant contributing source. White and white/pink sandstones are common in the pebble fraction and comprise 50% or greater of sandstone compositions (except for SIS2, HEM, and SUY). Input from sandstones that outcrop upstream in the Brazitis Nunataks are also possible given peaks (~550 – 600 Ma) similar to the tills. The late Neoproterozoic peak (~630 Ma) in these pebbles could account for the persistent 630-650 Ma peak in the Foundation Ice Stream tills, or this source could be buried by ice and unknown.

The origin of glacial erratic porphyries and oolitic limestones present only in the cobble fraction of till is also valuable for better understanding the underlying geology and constraining source units in the FIS catchment. The Thiel Mountains Porphyry is located upstream of the Patuxent Range in the Foundation Ice Stream catchment but on the opposite/west side of our collection site. It is described as a dark gray granodiorite/quartz monzonite porphyry and has a Rb-Sr age of 493 ± 23 Ma (Pankhurst et al., 1988). Van Schmus et al. (1997) reported a zircon discordia line that has a lower intercept at 500 ± 4 Ma and an upper intercept at 1093 ± 23 Ma. The porphyries in the Thomas Hills tills not only have a similar lithologic description, but have core and rim ages that are consistent with Van Schmus et al. (1998), suggesting the Thiel Mountains porphyry could extend further east underneath the Foundation Ice Stream. Furthermore, there are no other exposed rocks in the ice catchment with a similar composition to the porphyry erratics. Two oolitic limestones discovered in the cobble fraction of MOU and MAR could potentially be derived from the Nelson or Shackleton limestones, which contain ooids (Schmidt et al., 1965; Rees et al., 1989). The Nelson Limestone may be a more likely

candidate because it is located upstream of the Patuxent Range within the Foundation Ice Stream catchment.

Academy Glacier

The Academy Glacier flows adjacent to the Patuxent Formation on its southwestern margin, but also to Paleozoic carbonaceous strata, igneous bodies, and sedimentary strata of the Beacon Supergroup in the Neptune Range on its northern margin (Schmidt and Ford, 1969). Since the Academy Glacier till has dominant Ross/Pan-African and Grenville zircon populations, the Patuxent Formation is likely making a contribution to the till. However, because the Academy tills have a more equal proportion of Ross/Pan-African and Grenville peaks, and a more distinct late Neoproterozoic peak (~620 Ma), other sources must be contributing (Figure 6). They are likely from common red and white sandstones in the pebble fraction (LIC Red and LIC White Sandstones), which have zircons with similar peaks (~630 Ma), that could be providing zircons of similar age to the Academy tills.

One of the most notable characteristics of the Academy till pebble/cobble deposits is the wide variation in sandstone and metasandstone colors, which likely originates from the local Dover, Heiser, and Elliot sandstones, and the Elbow Formation of the Neptune Range. The characteristic presence of porphyritic and felsic granitic compositions in the pebble and cobble fraction could be sourced from the quartz-feldspar Mt. Hawke Rhyolite Porphyry, or the Serpan Granite. Given the north-south strike of the geology in the Neptune Range and the presence of porphyritic compositions in the till, the Mt. Hawke Rhyolite Porphyry could extend further south (Schmidt and Ford, 1969). In

addition, the Serpan Granite could also extend further south, or a more distal unexposed granitic source could supply the granites in the pebble and cobble fraction.

Recovery Glacier

Stephenson Bastion (STB)

The Turnpike Bluff Group, consisting of the Stephenson Bastion, Mt. Wegener, and Wyeth Heights Formations, is bedrock on the northern side of the Recovery Glacier, with the Stephenson Bastion Formation exposed at the till collection site. Although Buggisch and Kleinschmidt (2007) and Buggisch et al. (1994) have employed K/Ar and $^{40}Ar/^{39}Ar$ dating and Rb/Sr dating, the age of the Turnpike Bluff Group is not well established. Since zircon U-Pb ages have not been reported from these three formations, zircons in the till cannot be compared to zircons in a direct bedrock sample. However, zircon ages from the tills yield dominant Paleoproterozoic zircon populations (1610 Ma, 1770 Ma) and correspond with zircon ages from a greenschist (~1615 Ma) analyzed in this study most similar to greenschists described as a lithology found in the bedrock by Pankhurst et al. (1983). Although the greenschist was not directly taken from a bedrock outcrop, its occurrence of nearly 60% at both till sites and similarity to described bedrock suggests a local origin. Another potential source for the Paleoproterozoic age populations (1610 Ma, 1770 Ma) in the till is from granitic gneisses of the Shackleton Range Metamorphic Complex (SRMC) located upstream in the Read Mountains. Rb/Sr ages of 1763 ± 21 Ma and 1599 ± 38 Ma reported by Pankhurst et al. (1983) are interpreted as the original igneous emplacement and a later metamorphic resetting, assigning these basement rocks as a potential contributor to the tills. Most of the compositions at the STB

sites appear to be locally derived from greenschists and metasedimentary rocks of the Turnpike Bluff Group, with no notable erratics.

Whichaway Nunataks (WAW)

The bedrock geology at the Whichaway Nunataks on the southern side of the Recovery Glacier consists of tan and gray sandstones of the Whichaway Formation in the Beacon Supergroup intruded by Ferrar Group sills (Stephenson, 1966). Presumed bedrock samples from till yield zircons with a dominant Cambrian peak (~530 Ma) and secondary Proterozoic peaks (~630 Ma, ~1040 Ma). These peaks are consistent with age populations from formations within the Beacon Supergroup. Elsewhere in the TAM, Elliot et al. (2015) reported zircons from the lower Buckley Formation with a dominant Cambrian peak (~525 Ma), and the Fairchild Formation with dominant populations that span 595-530 Ma. Similar to the Foundation Ice Stream tills, there are no known zircon populations that can account for the ~630 Ma in the till, suggesting its source may be buried by ice, or originating from an exposed unit that has not been dated.

Rock types that are prevalent in the pebble fraction can be inferred from exposed local and exotic sources. Fine to medium grained brown and tan sandstones equivalent to descriptions of the Whichaway Formation bedrock reported by Stephenson (1966) comprise nearly 30% at WAW2 and 13% at WAW. The mafic rocks, also prevalent at both sites, have both extrusive and intrusive compositions that are consistent with the Kirkpatrick Basalt and dolerites of the Ferrar Group. Carbonate erratics comprise a notable 20% of the pebble fraction at WAW2. According to Stephenson 1966, early Cambrian carbonate erratics have been found in the Whichaway Nunataks, which Rowell et al. (1992) assigned to the Shackleton Limestone in the Argentina Range. It is not

known how far north this carbonate shelf extends. Due to a lack of limestone erratics in other Shackleton Range moraines, an observation corroborated by this study, Stephenson 1966 concluded their source is confined to a region south of the Recovery Glacier.

Slessor Glacier

The bedrock exposed near the Slessor Glacier is the Precambrian Upper Shackleton Range Metamorphic Complex (SRMC), which is mostly composed of Stratton Group metamorphic basement rocks, overlying Pioneers Group metasediments and metamorphic rocks, and ophiolites (Clarkson et al., 1995). The till sample was taken from the La Grange Nunataks where the Stratton Group Mathy's Gneiss is exposed with a zircon age of 2328 ± 47 Ma (Brommer et al., 1999). This age, the oldest reported age for the Shackleton basement, along with a similar Rb-Sr age of 2310 ± 130 Ma described by Pankhurst et al. (1983) are thought to reflect the age of crystallization of the gneiss before it was deformed. Brommer et al. (1999) also described a zircon age of 1715 ± 6 Ma that likely records the later stages of the Kimban orogeny in the Shackleton Range, which has been corroborated by zircon and monazite ages from Will et al. (2009). Since no bedrock was available for this site, these ages are used for comparison. Because the Slessor Glacier till has several zircon age populations in the Paleoproterozoic (1705, 2260, 2345, and 2415 Ma), it appears that the Slessor Glacier till largely reflects the local Stratton Group Mathy's Gneiss and recrystallization during the Kimban orogeny.

Pleistocene vs. Holocene Tills

Balco et al. (2016) described two different types of tills in the Thomas Hills: an "older" till at higher elevations that displays extensive patterned-ground formation and is highly weathered with a red color, and a "younger" till at lower elevations that has fresh, unweathered rock surfaces and is only seen on the northwest side of the Thomas Hills facing the Foundation Ice Stream (Figure 11). Cosmogenic nuclide exposure ages indicate the older tills are Pleistocene in age (~1 Ma), while the younger tills are Holocene in age (5-9 ka). Sites in this study from areas with older tills include MAR, YAR1, YAR2, YAR3, HEM, and SUY, and sites from areas with younger tills include MOU, MAM, YAR4, and SIS. Compositions from both till ages are dominated by brown, gray, red, white, and pinkish white sandstones, gray metasandstones from Patuxent Formation bedrock and small percentages of igneous rocks. The most notable difference in older till samples HEM and SUY are that they both have the highest percentages of red weathered pebbles, HEM has the highest percentage of igneous rocks (5% increase), and SUY has the most pebbles composed of quartz veins. The zircon distributions for available Pleistocene and Holocene tills are generally similar with dominant late Ross/Pan-African peaks and secondary Grenville peaks (Figure 5). The similar pebble compositions and zircon distributions of both young and old tills suggest that LGM ice originated from a source similar to present day ice.

Lithologic sources for offshore tills and implications for LGM flow paths

In this section, detrital zircon data from LGM tills in offshore cores are compared to onshore tills and bedrock in order to create LGM paleoflow reconstructions based on available data. Flowline reconstructions are based on peak matching in probability density plots, statistical comparisons, and published information about bedrock geology to determine the provenance of offshore tills.

Western Weddell Sea

The dominant Jurassic age populations (~170-180 Ma) in PS 1423-2 at 217-219 cm and 262-264 cm indicate a contribution from units that record Jurassic volcanism related to the extension of Gondwana and are therefore significantly different from all of the onshore tills analyzed. Within the Institute Ice Stream catchment, there are numerous granitic intrusions, however, the western location of PS 1423-2 makes input from till transported by the Evans or Rutford Ice Streams or small local outlet glaciers from the southern Antarctic Peninsula more likely because their flow paths are closer to PS 1423-2. Mapped Mesozoic granitoids (Tingey, 1991) between the Ellsworth Mountains and the Antarctic Peninsula (AIP) along with Jurassic-Cretaceous back-arc basin sediments of the Latady Formation (Laudon, 1991) that extend along the eastern margin of the AIP are the most likely sources given their proximal location to the core. Furthermore, the Latady Formation could also be the source of the late Jurassic-Cretaceous secondary populations (~120-150 Ma) that are prevalent in PS 1423-2. Although the Dufek Massif and Ferrar Group rocks have zircon ages that are similar to Jurassic zircon age populations in PS 1423-2, they do not have known outcrops that are as geographically close as other potential sources.

Aside from the strong Mesozoic signals, there are dominant Ross Pan-African (500-590 Ma and 630 Ma) and relatively small Grenville (1000-1080 Ma) peaks. The Crashsite Group and Whiteout Conglomerate, located in the western Ellsworth Mountains, have similar zircon age distributions (Castillo et al., 2017). Given that these rocks are along the Rutford Ice Stream's flow path, it is likely that they are sources for zircons in PS 1423-2.

Central Weddell Sea

In PS 1197-2 and 1278-1, the dominant Ross/Pan-African and secondary Grenville age populations resemble the zircon populations of the Foundation/Academy and southern Recovery Glaciers. Although the Institute Ice Stream is a possible source for tills in core 1197-2, its high proportion of Grenville-age grains makes it a poor match (Figure 12). If the Patuxent Formation bedrock extends into the Institute catchment, it is a probable source of the high Ross/Pan-African and low Grenville peaks because it is a spatially expansive unit and is the closest exposure with these age populations. Jurassic granites at Pagano Nunatak (174.8 Ma), Pirrit Hills (174.3–173.9 Ma) and Nash-Martin Hills (177.4–177.3 Ma) (Craddock et al., 2016) in the Institute Ice Stream catchment could be the source of Mesozoic ages in PS 1197-2. Unfortunately, no till is exposed at the surface along the eastern margin of the Institute Ice Stream to evaluate this idea.

In PS 1278-1, sedimentary rocks from the Patuxent Formation and other sandstones (YAR4B, YAR4C, LIC White Sandstones) are a likely source of the high Ross/Pan-African and low Grenville peaks (Figures 4 and 5). The white sandstones in Academy Glacier till could be derived from the local Dover and Heiser sandstones, or the Elbow Formation in the Neptune Range. Igneous sources contributing Ross/Pan-African zircons

should not be discounted. For instance, the Thiel Mountains, located upstream of the Pensacola Mountains, contain porphyries and granites; these rocks types are also present in the Neptune Range near the Academy Glacier. Till is not exposed along the Support Force Glacier, but because it has Patuxent Formation exposed along the downstream portion of its flow path (Schmidt and Ford, 1969), ice derived from this region of the WSE could also contribute to Ross/Pan-African ages in PS 1278-1. Ice derived from the southern Recovery Glacier is also possible because zircons from the Beacon Supergroup in the Whichaway Nunataks have similar Ross/Pan-African proportions.

Eastern Weddell Sea

In the eastern most core studied, PS 1400-1 (216-218 cm and 278-280 cm), the dominant Ross/Pan-African and secondary Grenville age populations are similar to peaks in the Foundation/Academy and the south side of the Recovery. However, given the more proximal location of the Recovery Ice Stream, its contribution is more likely. The south side of the Recovery shares the bimodal Ross/Pan-African peaks (530, 630 Ma) and secondary Grenville age peaks (1040 Ma) that are present in this core.

Grains from the Paleo-Mesoproterozoic populations indicative of the north side of the Recovery and Slessor Glaciers are notably absent from all cores analyzed (Figure 12). A potential explanation for an absence of these old grains in the offshore record is that the Beacon Supergroup extends under the Recovery Glacier trough to the fault-bounded Shackleton Range exposure (Paxman et al., 2017). This assertion is supported by the presence of zircon ages in till from the northern side of the Recovery (Site STB) with a small, but significant ~530 Ma peak similar to Beacon Supergroup bedrock in the Whichaway Nunataks. In this scenario, the Recovery Glacier has discharged most of its

ice and sediment down the eastern side of the Thiel/Crary trough, covering core site PS 1400.

The muted signal from the Shackleton Range is especially perplexing given the high present-day discharge rates from the Recovery and Slessor (35 and 24.8 Gton/year respectively) (Joughin and Bamber, 2005). Our data suggest that the ice/sediment flux from the Slessor and Recovery basins during the LGM was smaller relative to other ice stream fluxes. The presence of Jurassic (~180 Ma) grains in PS 1400 could be coming from the Ferrar Group or the Dufek Massif.

Possible flow reconstructions

Two endmember LGM reconstructions are possible from the existing detrital zircon datasets (Figure 12). The primary difference lies in the flow paths of the Institute and Foundation Ice Streams. In Scenario A, the Institute Ice Stream followed the bathymetric low on the western side of unnamed isolated bedrock highs, depositing till in between PS 1423-2 and PS 1197-2. If the Institute followed this western flow path, the Foundation Ice Stream could have flowed west around Berkner Island similar to its modern path. This would allow the Support Force and Recovery Glaciers to dominate flow into the Filchner Shelf. This is based on the assumption that these two ice streams are transporting till dominated by Ross/Pan-African age zircons.

In contrast (Scenario B), if the Institute flowed over subglacial topography following a more easterly flowline to deposit till closer to PS 1197-2, West Antarctic ice from the Institute and Moller Ice Streams might dominate the central Weddell Sea. In this second scenario, Foundation ice is forced into an easterly flow path around Berkner Island. The Recovery would then flow alongside the Foundation and the Support Force to

fill the Filchner Trough. The presence of Mesozoic grains in PS 1197 derived from the numerous Jurassic exposures in the Institute catchment is the primary evidence for this reconstruction. The widespread Ross/Pan-African ages limit our ability to distinguish between these scenarios. Additional samples are needed to further refine these reconstructions.

Comparison to other chronometers and models

In this section, we compare our findings to studies that have used other provenance tools and those that have created models to reconstruct ice stream configurations during the LGM. Overall, our results are consistent with their findings.

Comparison to other chronometers

Pierce et al. (2014) used U-Pb zircon, $^{40}Ar/^{39}Ar$ hornblende, and $^{40}Ar/^{39}Ar$ biotite age populations from tills and ice rafted debris (IRD) in offshore cores around the continent to establish a multi-chronometer signature and document onshore geology (Figures 13 a-c). Data from the WSE region of their study (Cores 1-4) are consistent with our results. They suggested that the ~500 Ma age present in each of the chronometers in the Weddell and Dronning Maud Land sectors (Cores 1-14) originates from Ross and Pan-African source rocks. We also see zircon ages with similar Ross-Pan/African ages in our offshore cores, specifically in PS 1278-1 and 1400-1 given their proximity to Core 3. Furthermore, zircons in PS 1423-2 share the Grenville and Jurassic biotite ages present in Core 1. An interesting observation is that they also see a muted signal from the Shackleton Range in Core 4 containing 104 zircons.

Diekmann and Kuhn (1999) used heavy mineral assemblages (hornblende, garnet, and clinopyroxene) in offshore surface sediments as markers for onshore source areas (Figure 14). These assemblages, or "clusters" have consistencies with our dataset. For example, Cluster 3 has very high percentages of garnet, diagnostic for the Beacon Supergroup. Cluster 3 surface sediments are centrally positioned in front of the Filchner Ice Shelf where the Recovery Glacier, which erodes Beacon Supergroup rocks, likely discharged ice and sediment during the LGM. Cluster 4 has high percentages of

pyroxene, which the authors suggest originate from the Ferrar Group and/or Dufek Massif. This could explain the small proportions of the Jurassic ages in the eastern Weddell Sea.

Comparison to models

Modeling by Whitehouse et al. (2017) includes a scenario where the Foundation Ice Stream followed its present-day western trajectory along Berkner Island during the onset of glacial conditions. Other modeling scenarios suggest that grounded ice switched to an easterly flow path during the LGM (Whitehouse et al., 2017; Whitehouse et al., 2012; Le Brocq et al., 2011). Given that the Foundation Ice Stream signature is present in PS 1278 and PS 1197, our results are consistent with either reconstruction.

Golledge et al. (2013) modelled ice flow for the entire continent during the LGM (Figure 15). Our results are also consistent with their LGM reconstructions. Similarities include discharge from the Evans Ice Stream into the westernmost Weddell Sea, a scenario where the Institute Ice Stream flows over subglacial topography near PS 1197, and the Foundation Ice Stream flowing east of Berkner Island (Figure 12, Scenario B).

Conclusions

Glacially eroded sediment deposited in moraines can be used as a tool to trace the flow paths of major outlet glaciers and ice streams of the Weddell Sea Embayment and provide a window into unmapped compositions that are buried by ice upstream. Unique fingerprints for the Institute, Foundation, Recovery, and Slessor Ice Streams are revealed through U-Pb dating of zircons from till. Distinctive zircon age populations for each ice stream include:

1. Western Institute Ice Stream: two dominant peaks at 560 Ma and 1070 Ma
2. Foundation Ice Stream and Academy Glacier: dominant peak at 505 Ma and a secondary peak at 1030 Ma
3. Recovery Glacier: two dominant peaks at 530 Ma (southern margin) and 1610 Ma (northern margin)
4. Slessor Glacier: dominant peak at 1700 Ma and secondary peaks at 2260 Ma, 2345 Ma, and 2415 Ma

The origin of zircons in most moraines is likely from a combination of local bedrock sources, and more distal upstream subglacial bedrock. This conclusion is based on comparison to peak zircon age populations measured directly from bedrock exposures, common erratics, or taken from literature. Dominant age populations in the Institute Ice Stream tills are consistent with zircons from the locally exposed Frasier Ridge Formation. The dominant zircon age peaks in Foundation tills are similar to ages from the locally exposed Patuxent Formation. However, the proportion of ages 550-650 Ma in the till is substantially higher, which suggests exotic sandstones are contributing. The Recovery

Glacier is characterized by distinctly differing zircon populations from till on the southern margin (Whichaway Nunataks) and northern margin (Stephenson Bastion). This is attributed to the contrasting bedrock geology on either side of the Recovery Glacier, but local bedrock alone cannot explain the zircon distributions in these ice streams. Similar to Foundation Ice Stream tills, there are no known zircon age populations that can account for the ~630 Ma in the Recovery Glacier tills, suggesting its source may be buried by ice. Zircon ages from the Slessor Glacier till also likely locally derived because they are similar to published ages of the local Stratton Group Mathy's Gneiss (Brommer et al., 1999)

Available pebble lithology data support interpretations from zircon ages, that is the till is a mixture of locally derived and exotic material. In the pebble fraction of Foundation tills, most of the gray metasandstones are similar in composition to the Patuxent Formation, but also contain abundant exotic "common" white and white/pink sandstones, as well as other less common exotic erratics (porphyry, limestone, etc). In the tributary Academy Glacier, most pebbles/cobbles likely originate from the local Dover, Heister, and Elliot sandstones, and the Elbow Formation of the Neptune Range. In the Recovery tills, the pebble lithology is distinctly different between the Stephenson Bastion (greenschists) and Whichaway Nunataks (gray and brown sandstones) sides. The Whichaway pebbles/cobbles also contain limestone and dolerite.

Zircons in offshore cores were successfully used to recognize the onshore signal in most ice streams. Overall, zircons show a general trend of decreasing Mesozoic ages from west to east. Jurassic zircon populations seen in the westernmost core, PS 1423, are

not accounted for by onshore till analyzed, and indicate input from rocks formed during Jurassic extension derived from the adjacent southern portion of the Antarctic Peninsula. The Ross/Pan-African and Grenville peaks prevalent in remaining offshore cores are similar to onshore tills from the Foundation and southern Recovery margin. The much higher proportion of Grenville ages from the Institute Ice Stream till sample was not found in the offshore samples analyzed. This suggests that the western Institute Ice Stream did not have a flow path across site 1197, but rather one between PS 1423 and 1197.

Relevant to numerical ice sheet models, a particularly significant discovery was that the Foundation Ice Stream could have deposited the zircons in core PS 1278. If so, this ice stream had an easterly flow path around Berkner Island at some point during the LGM and then switched to its modern flow path west of Berkner Island. An unexpected find was the lack of Proterozoic grains from the Shackleton Range in the easternmost Weddell Sea. This requires a remarkably small ice/sediment flux from the Slessor and Recovery Glaciers during the LGM, and that they Recovery Glacier trough is mostly underlain by Beacon Supergroup rocks.

Our results are mostly consistent with other field and modeling studies. Pierce et al. (2014) corroborates the absence of Proterozoic grains coming from the Shackleton Range, while both modeling studies also suggest an easterly flow switch of the Foundation during the LGM. This study highlights the value of using zircon to fingerprint ice streams, constrain onshore source rocks, and better understand ice stream configurations during the last ice age.

Table 1. Analysis per sample in onshore tills (SAL number, sample ID, lat/long, till age, pebbles, particle size, U/Pb, ice stream, local geology)

	SAL	Sample ID	Latitude	Longitude	Till Age	Pebbles	Particle Size	U/Pb	Ice Stream	Local Geology
Ellsworth Mountains (Heritage Range)	-	Ind. Hills	-80.31615	-81.71437	Holocene	-	-	X	Institute	Frasier Ridge Fm.
	-	Pat. Hills	-80.31615	-81.71437	Holocene	-	-	X	Institute	Frasier Ridge Fm.
	-	Riv. Moraine	-80.31615	-81.71437	Holocene	-	-	X	Institute	Frasier Ridge Fm.
Patuxent Range	2108	HEM	-84.44011	-65.36979	Pleistocene	X	X	X	Foundation	Patuxent Fm.
	2111	MAM	-84.35213	-65.23618	Holocene	X	X	-	Foundation	Patuxent Fm.
	2112	MAM2	-84.35337	-65.24587	Holocene	X	X	X	Foundation	Patuxent Fm.
	2113	MAR	-84.36741	-65.30491	Pleistocene	X	X	-	Foundation	Patuxent Fm.
	2114	MOU	-84.33028	-65.09882	Holocene	X	X	X	Foundation	Patuxent Fm.
	2115	MOU2	-84.3304	-65.09832	Holocene	X	X	X	Foundation	Patuxent Fm.
	2116	SIS	-84.44184	-66.27036	Holocene	X	X	X	Foundation	Patuxent Fm.
	2117	SIS2	-84.44589	-66.23227	Holocene	X	X	-	Foundation	Patuxent Fm.
	-	SUY	-84.53263	-65.47683	Pleistocene	X	X	-	Foundation	Patuxent Fm.
	2123	WEB	-84.29496	-62.86458	Pleistocene	X	X	-	Academy	Patuxent Fm.
	2126	YAR4A	-84.4196	-66.07255	Holocene	-	X	-	Foundation	Patuxent Fm.
	2127	YAR4B	-84.41954	-66.07202	Holocene	X	X	-	Foundation	Patuxent Fm.
	2128	YAR4C	-84.41921	-66.06037	Pleistocene	X	X	X	Foundation	Patuxent Fm.
	-	YAR3	-84.40903	-65.97051	Pleistocene	-	X	-	Foundation	Patuxent Fm.
	-	YAR2	-84.41975	-65.89921	Pleistocene	X	X	X	Foundation	Patuxent Fm.
	-	YAR1	-84.43109	-65.79125	-	Cobbles Only	-	-	-	Patuxent Fm.
Neptune Range	2109	LIC	-83.90068	-57.42117	Pleistocene	X	X	X	Academy	Dover Sandstone
	2110	LIC2	-83.8981	-57.42461	Pleistocene	X	X	-	Academy	Dover Sandstone
Whichaway Nunataks	2121	WAW	-81.50575	-28.68155	Holocene	X	X	X	Recovery	Beacon Supergroup
	2122	WAW2	-81.5063	-28.68579	Holocene	X	X	-	Recovery	Beacon Supergroup
Shackleton Range	2118	STB	-80.8047	-27.24014	Holocene	X	X	-	Recovery	Turnpike Bluff Gp.
	2119	STB2	-80.80461	-27.23978	Holocene	X	X	X	Recovery	Turnpike Bluff Gp.
	1925	SAL1925	-80.2902	28.67029	Holocene	-	X	X	Slessor (from Sugden)	Upper Shackleton Range Metamorphic Complex

*Bentley et al. (2010), Balco et al. (2016), Flowerdew et al. (2007), Schmidt and Ford (1969), Stephenson (1966), Clarkson (1982)

Table 2. Pebbles and cobbles analyzed for zircon geochronology

Sample Name	Location	Onshore Site	Ice Stream	Latitude	Longitude	Local Geology	Rock Type	Bedrock/Common/ Exotic
GR R-1	Neptune Range	LIC 2109	Academy	-83.90068	-57.42117	Dover Sandstone	Granite	Exotic
LIC SS qtz R-3	Neptune Range	LIC 2109	Academy	-83.90068	-57.42117	Dover Sandstone	Sandstone	Common
LIC SS red R-10	Neptune Range	LIC 2109	Academy	-83.90068	-57.42117	Dover Sandstone	Sandstone	Common
YAR4C SS R-4	Patuxent Range	YAR4C 2128	Foundation	-84.41921	-66.06037	Patuxent Fm.	Sandstone	Common
POR R-5	Patuxent Range	Thomas Hills Erratics	Foundation	-	-	Patuxent Fm.	Porphyry	Exotic
YAR4B SS R-7	Patuxent Range	YAR4B 2127	Foundation	-84.41954	-66.07202	Patuxent Fm.	Sandstone	Common
BRZ R-6	Brazitis Nunatak	Bedrock Outcrop	Foundation	-84.96946	-67.28427	Devonian Sandstone	Sandstone	Bedrock
YAR1 R-2	Patuxent Range	Bedrock Outcrop	Foundation	-84.43109	-65.79125	Patuxent Fm.	Meta-sandsone	Bedrock
STB R-8	Shackleton Range	LIC 2109	Recovery	-80.8047	-27.24014	Turnpike Bluff Gp.	Greenschist	Bedrock
WAW R-9	Whichaway Nunataks	YAR4C 2128	Recovery	-81.50575	-28.68155	Beacon Supergroup	Sandstone	Bedrock

Table 3. Pebble classification scheme (igneous, metamorphic, metasedimentary, sedimentary)

Igneous	Intermediate/Mafic	<20% Quartz (qtz), K-spar, Plagioclase
	Porphyry	Coarse feldspar or qtz crystals in a fine-grained groundmass
Metamorphic	Quartzite	Conchoidal fracture, sugary texture, indistinguishable grain boundaries, cannot be scratched
	Vein	Usually composed of quartz, lacking sugary texting of quartzite
	Slate	Foliated shale with dull luster
	Slate/Phyllite	Foliated shale with dull to shiny luster depending on degree of metamorphism
	Phyllite/Schist	Foliated shale with luster greater than slate/phyllite
	Greenschist	Green fine-grained foliated rock with shiny luster
Meta-sedimentary	Metasandstone	Sandstones that have undergone varying degrees of metamorphism, but not to the level of a quartzite, grain boundaries still distinguishable
	Metasiltstone	Grains <63µm, grains too small to determine grade of metamorphism, has dull shiny luster
	Metamudstone	May contain some silt grains, grains too small to discern, feels waxy on fresh surface, has dull shiny luster
Sedimentary	Sandstone	Dominated by quartz or feldspar, any grain roundness and size (>63µm) with or without cement
	Siltstone	Dominated by grains <63µm, gritty texture
	Mudstone	Grain size too small to discern, has smooth texture
	Shale	Bedded or laminated silt, clay, or mud
	Limestone	Composed primarily of $CaC0_3$, effervesces with 3% HCl
	Conglomerate	Fragments are >2mm in a matrix of finer-grained material, larger fragments and matrix are clastic and/or carbonate
	Volcaniclastic	Contains fragments of volcanic material

Table 4. Analysis per sample in offshore tills (core name, core depth, size fraction, expedition, location, lat/long)

Core Name	Core Depth (cm)	Size Fraction (µm)	Expedition	Location	Latitude/Longitude
PS 1423-2	217-219	63-250	ANT-IV/3	Ronne Trough	-74.70, -61.32
PS 1423-2	262-264	63-125	ANT-IV/3	Ronne Trough	
PS 1423-2	262-264	125-250			
PS 1197-2	320-322	63-125	ANT-II/4	West of Berkner Island	-76.36, -53.21
PS 1197-2	320-322	125-250			
PS 1278-1	44-46	63-125	ANT-III/3	Northeast of Berkner Island	-77.54, -42.13
PS 1278-1	44-46	125-250			
PS 1216-1	35-36	63-125	ANT-II/4	Filchner Trough	-77.69, -37.07
PS 1216-1	35-36	125-250			
PS 1400-1	216-218	63-250	ANT-IV/3	Filchner Trough	-77.55, -36.40
PS 1400-1	278-280	63-125	ANT-IV/3	Filchner Trough	
PS 1400-1	278-280	125-250			

*Hillenbrand et al. (2012)

Table 5. Particle size data <2mm for onshore tills (%sand, %silt, %clay)

		% SAND							% SILT						% CLAY	
	Site ID	V. Coarse	Coarse	Medium	Fine	V. Fine	Total	Average	Coarse	Medium	Fine	V. Fine	Total	Average		Average
Patuxent Range	HEM	3.2	10.5	13.8	11.0	8.1	46.6		4.5	5.5	4.9	7.1	22.0		31.3	
	MAM	16.8	19.7	9.1	6.1	4.9	56.5		3.0	4.6	4.6	6.5	18.7		23.6	
	MAM2	7.3	14.0	8.8	3.3	3.2	36.6		3.2	6.2	6.7	9.0	25.2		37.8	
	MAR	6.2	11.1	10.4	7.1	5.0	39.8		3.1	5.4	6.5	9.2	24.2		35.6	
	MOU	1.0	9.9	20.0	16.1	11.1	58.1		7.4	7.5	5.1	5.9	26.0		15.9	
	MOU2	5.4	16.1	17.2	8.1	4.4	51.2		3.1	5.1	5.5	7.5	21.1		27.3	
	SIS	3.0	12.2	14.4	9.0	6.7	45.4		4.6	5.6	4.7	6.9	21.8		32.7	
	SIS2	6.5	17.8	15.8	8.5	7.4	56.0	51.1	4.5	4.6	4.2	6.4	19.7	21.9	24.1	27.0
	SUY	9.8	20.0	19.2	15.6	11.4	76.0		4.9	4.8	3.5	3.6	16.8		6.6	
	WEB	1.2	5.6	7.6	7.8	7.7	30.0		4.7	7.8	9.1	12.0	33.6		36.6	
	YAR4A	3.6	10.5	14.3	10.5	7.1	46.0		4.4	5.4	5.2	7.5	22.6		36.6	
	YAR4B	11.3	23.0	16.1	6.1	3.6	59.9		2.4	4.4	4.9	6.6	18.2		21.3	
	YAR4C	8.7	18.8	15.9	7.9	5.2	56.5		3.2	4.8	5.4	7.6	21.1		22.0	
	YAR3	6.6	19.6	16.2	8.1	6.0	56.5		3.6	4.7	4.4	6.2	19.0		24.4	
	YAR2	6.1	17.1	16.0	8.0	5.0	52.1		2.9	3.9	4.3	6.8	18.0		29.7	
Neptune Range	LIC	14.0	23.0	13.0	7.4	5.9	63.3	51.8	3.4	5.7	5.7	6.6	21.4	21.3	14.5	26.4
	LIC2	6.5	13.4	9.7	5.8	4.9	40.2		3.0	4.9	5.4	7.9	21.1		38.3	
Whichaway Nunataks	WAW	4.2	12.0	19.5	22.4	16.6	74.7	72.7	6.8	6.9	4.2	3.2	21.0	22.5	4.1	4.6
	WAW2	6.6	11.4	14.5	20.2	18.0	70.7		8.0	7.7	4.6	3.6	23.9		5.0	
Shackleton Range	STB	22.4	29.3	14.9	8.6	5.3	80.5		2.0	2.3	2.9	4.4	11.7		6.2	
	STB2	12.5	18.4	15.6	12.1	8.6	67.1	71.1	3.9	4.8	6.1	7.8	22.6	21.5	9.4	6.5
	SAL1925	2.2	6.7	13.5	23.0	20.4	65.8		8.4	10.1	7.0	4.7	30.2		3.9	

Table 6. Pebble counts for the onshore till (lithology, presence of glacial features)

Site ID		METASEDIMENTARY																						
		Metasandstone																				Metasiltstone		Metamudstone
		Brown	Yellow/Brown	Red	Red Brown	Purple	Dk. Purple	Pink	White/Red	White	Gray	Lt. Gray	Dk. Gray	Flat Gray	Green	Green/Tan	Black	Weathered	Veins	Other	F/S	F/S		
Foundation I.S	MOU			3		3			2	6		4	20											
	MOU2	5		1	2							12	53						7				2	2
	MAM	6								1		50	59						7				6	
	MAM2			1						6		22	38						2			1	7	
	MAR	19				2				2		24	49								1	2	7	
	HEM	10									9							7						
	YAR2	40									49				3				7					
	YAR4C	2									136								6					
	YAR4B	1		2							122		5						1					
	SIS	2										11	24						2					
	SIS2	20								1				26						3				
	SUY	3									5							58	2					
Academy I.S	LIC	5				3		7		6						14								
	LIC2	1		1						5	6				7			4		2				
	WEB	46									27			17										
Recovery I.S	WAW										4			15								14		
	WAW2	1									25						5							
	STB						2				29									4				
	STB2		4				5				21													

CG = Coarse Grained, FG = Fine Grained, F/S = Faceted and/or Striated

Table 6 continued. Pebble counts for the onshore till (lithology, presence of glacial features)

		SEDIMENTARY																								
Site ID		Sandstone																			Siltstone	Mudstone	Shale	Conglomerate	Limestone	Volcaniclastic
		Brown	Dk. Brown	Lt. Brown	Tan	Brown/Gray	Red Brown	Yellow/Brown	Red	Red/White	Purple	Pink/Purple	Red/Purple	White	White/Pink	Gray	Veins	Other F/S								
	MOU								3			2		23		12			2			1	1	6		
	MOU2								4	5				15	9	2						1		6		
	MAM	2							7					20	3			2				10	1	3		
	MAM2	4							10					16	14								4	2		
	MAR	4							2					17										1		
Foundation I.S	HEM				3				3					6		1	20					2		4		
	YAR2	9							4					30		1	1					8		8		
	YAR4C	1											5	24		1						18		1		
	YAR4B	2							2					28		4						13		2		
	SIS		14	26			26		19							2	2							2		
	SIS2	3							7					9	7									3		
	SUY																					3		1		
	LIC				6			2	5	5	30			16	15	3							1			
Academy I.S	LIC2				6			4					26	5	14	1	2							1		1
	WEB	1				1	2										5									
	WAW							8															1	4		
Recovery I.S	WAW2	18														13	1			1	1		3	22		
	STB																									
	STB2																									

CG = Coarse Grained, FG = Fine Grained, F/S = Faceted and/or Striated

Table 6 continued. Pebble counts for the onshore till (lithology, presence of glacial features)

Site ID		IGNEOUS					METAMORPHIC					
		Felsic		Intermediate/Mafic		Porphyry						
		CG	FG	CG	FG		Quartzite	Veins	Slate	Slate/Phyllite	Phyllite/Schist	Greenschist
Foundation I.S	MOU				1	1		1	3			
	MOU2							1	3			
	MAM			1					1			
	MAM2			2		1						
	MAR				1		2	1	6			
	HEM			4	1		1	3				
	YAR2			1					1			
	YAR4C							1				
	YAR4B			1			1		11			
Academy I.S	SIS	1		2						1		
	SIS2				1				2			
	SUY							11				
	LIC	1	1			11						
	LIC2				1	7	1			2		
	WEB							4		1		
Recovery I.S	WAW	1	1	10	6							
	WAW2			19	1				1			
	STB											54
	STB2									4	1	50

CG = Coarse Grained, FG = Fine Grained, F/S = Faceted and/or Striated

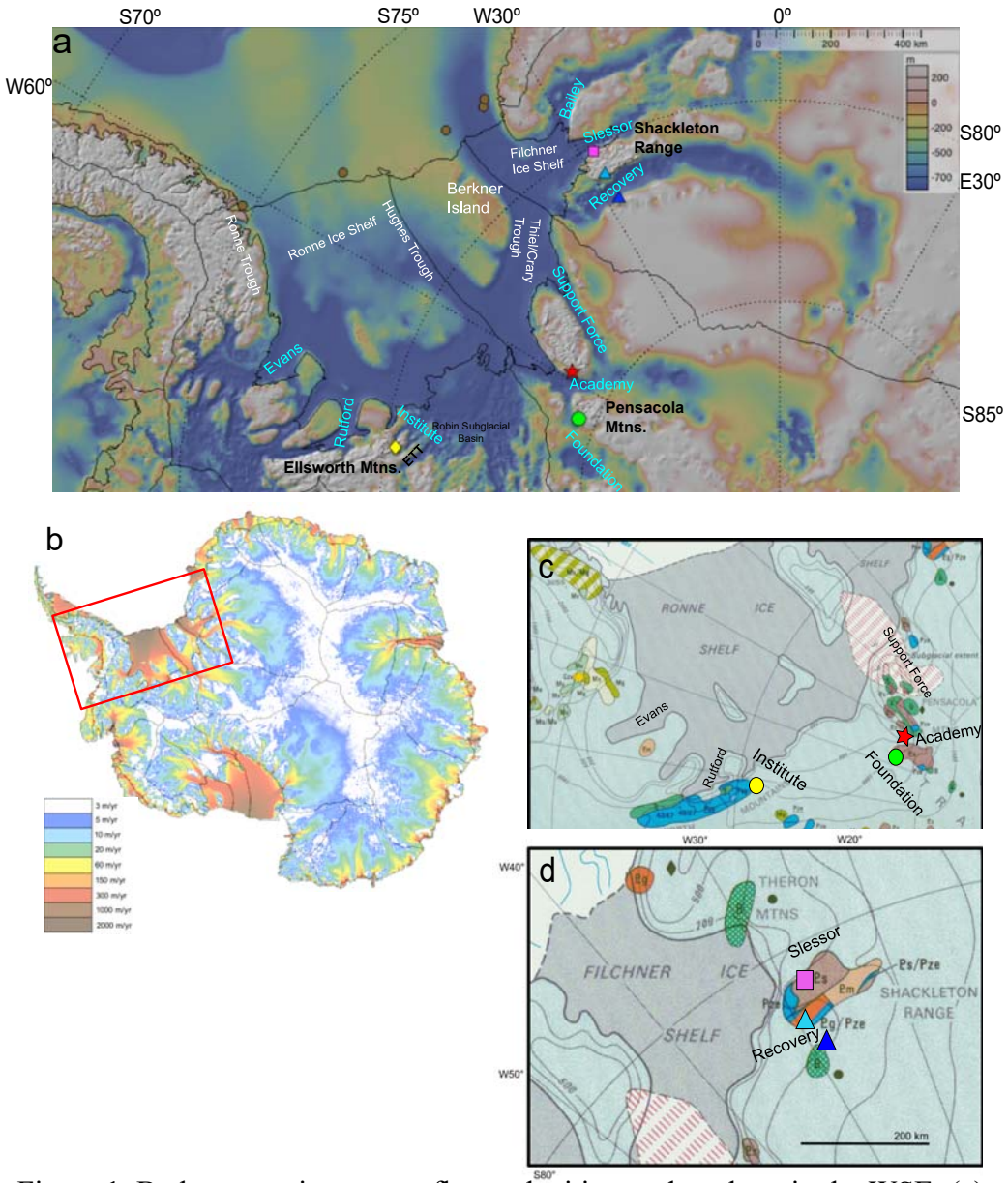


Figure 1. Bathymetry, ice stream flow velocities, and geology in the WSE; (a): bathymetry of WSE with sample sites and cores used in study (GeoMapApp). (b): ice stream catchments and flow speed in meters/year (Rignot et al., 2011; Mouginot et al., 2012). (c, d): bedrock geology underlying till sample sites with surface ice elevation contour lines (Tingey, 1991). (c): bedrock underlying Foundation and Academy till. (d): bedrock underlying the Slessor and Recovery till. Orange circles = offshore cores, purple square = Slessor till, light blue triangle = northern Recovery till, dark blue triangle = southern Recovery till, red star = Academy tills, green circle = Foundation tills, ETT = Ellsworth Trough tributary, Ms/Mg = Mesozoic sedimentary rocks/Mesozoic granitoids, Pze = early Paleozoic sedimentary and volcanic rocks, Ps = Proterozoic low grade metamorphic sediments, B = Beacon Supergroup, Pg = Cambrian and Ordovician granitoids, Ji = Jurassic Ferrar Group

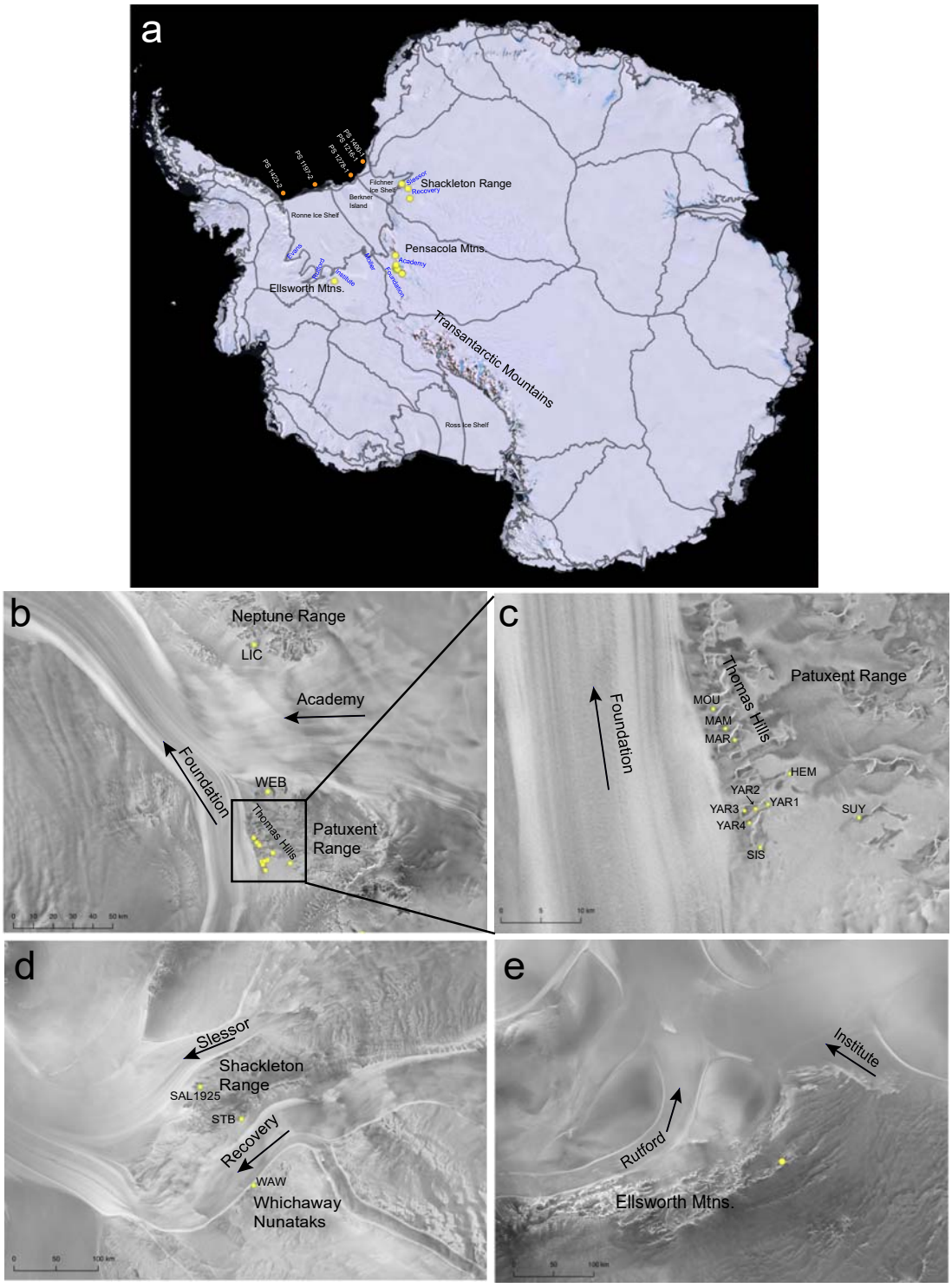


Figure 2. Location of onshore and offshore sample sites; Top figure (a) shows onshore samples (yellow circles) and offshore samples (orange circles) within ice stream drainage basins. Bottom figures show location of onshore samples used in this study in the Pensacola Mountains (Patuxent and Neptune Ranges) (a, b), Shackleton Range (d), Whichaway Nunataks (d), and Ellsworth Mountains (e). Imagery from Quantarctica.com.

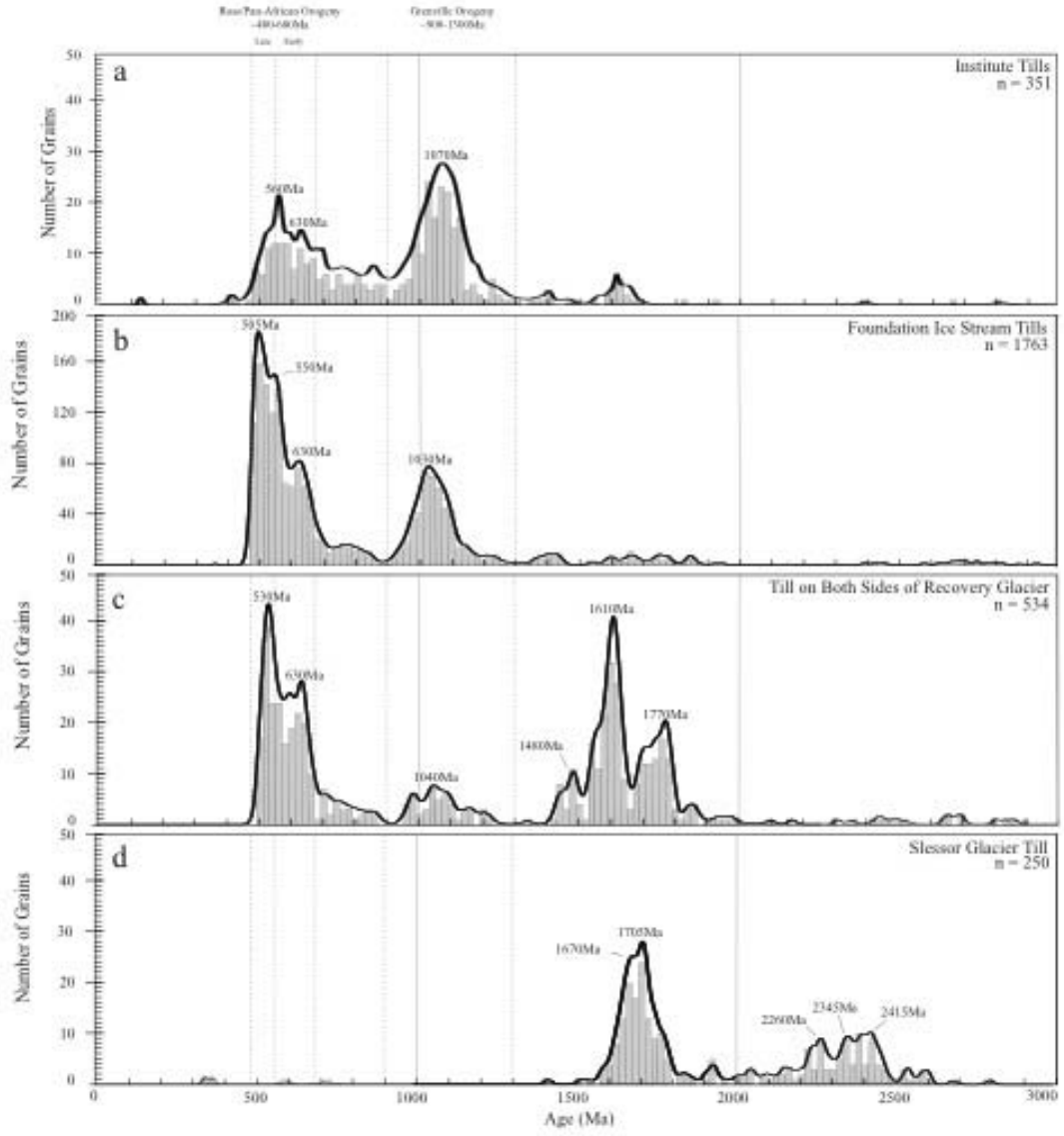


Figure 3. Probability density plots of zircon age populations in onshore tills Probability density plots showing the peak zircon age populations in onshore tills transported by the Institute, Foundation, Recovery and Slessor ice streams. The Academy Glacier is not shown because it flows into the Foundation and has a very similar zircon distribution. The fingerprint of each ice stream is as follows: the higher proportion of 560Ma relative to 1070Ma zircon ages in the Institute till, the higher proportion of 505Ma relative to 1030Ma ages in the Foundation till, the presence of both 530Ma, 1040Ma, and 1610Ma ages in the Recovery till, and peaks older than 2Ga in the Slessor till. Bin widths are 20Ma and x-axis was cut off at 3Ga, as there were no significant older peaks. Dotted lines represent Ross and Grenville ranges taken from Licht et al. (2014) and Goodge et al. (2010).

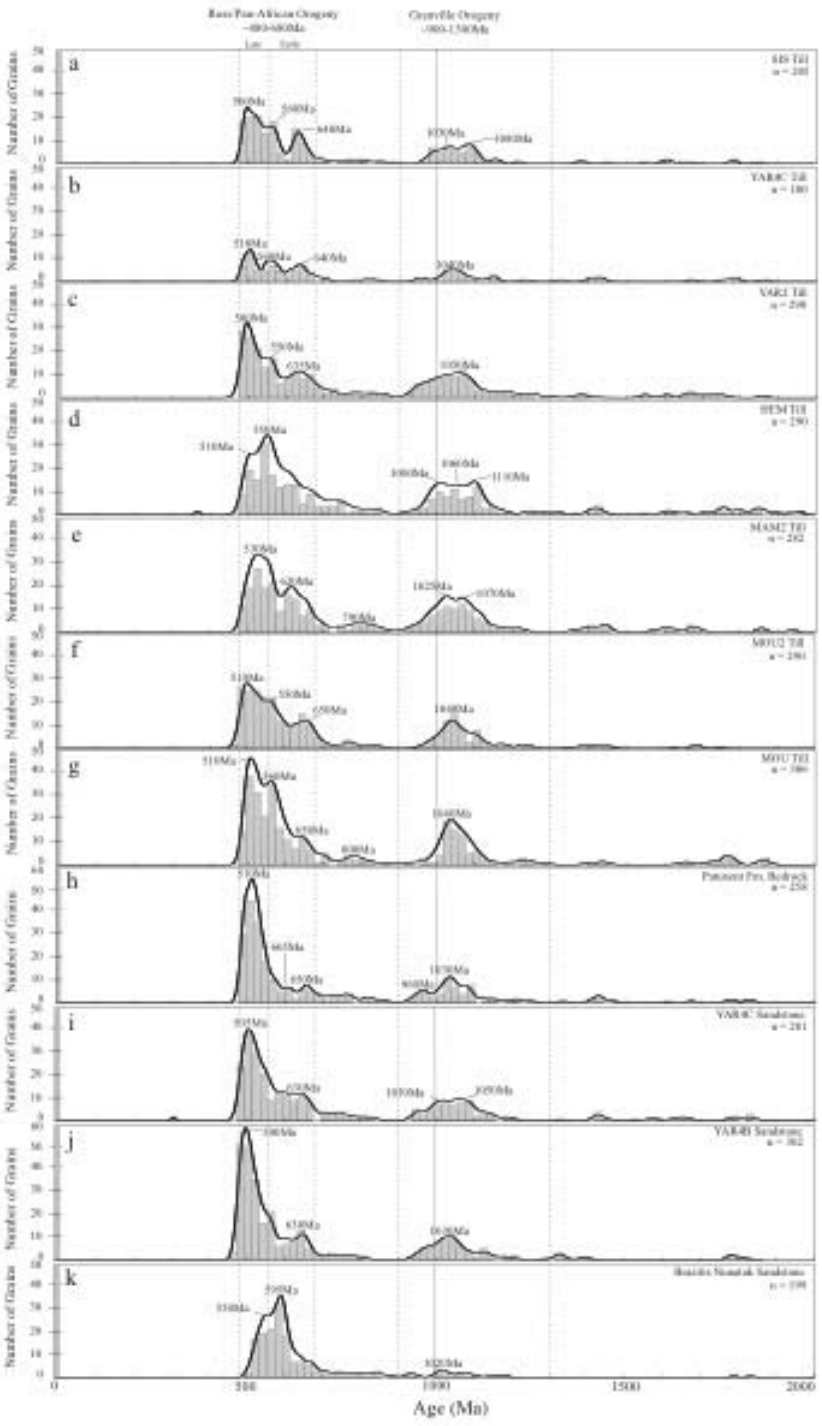


Figure 4. Probability density plots of zircon age populations in Foundation Ice Stream tills, local bedrock, and common sandstones; show peak zircon age populations in FIS onshore tills (a-g), local Patuxent Formation bedrock (h), and potential non-local sedimentary sources for till (i-k). Bedrock and sandstones have similar peaks to tills, but tills have ages that likely come from other sources. Brazitis Nunatak bedrock has similar age populations to tills. Bin widths = 20Ma and x-axis cut off at 2Ga, as there were no significant older peaks. Dotted lines represent Ross and Grenville ranges taken from Licht et al. (2014) and Goodge et al. (2010).

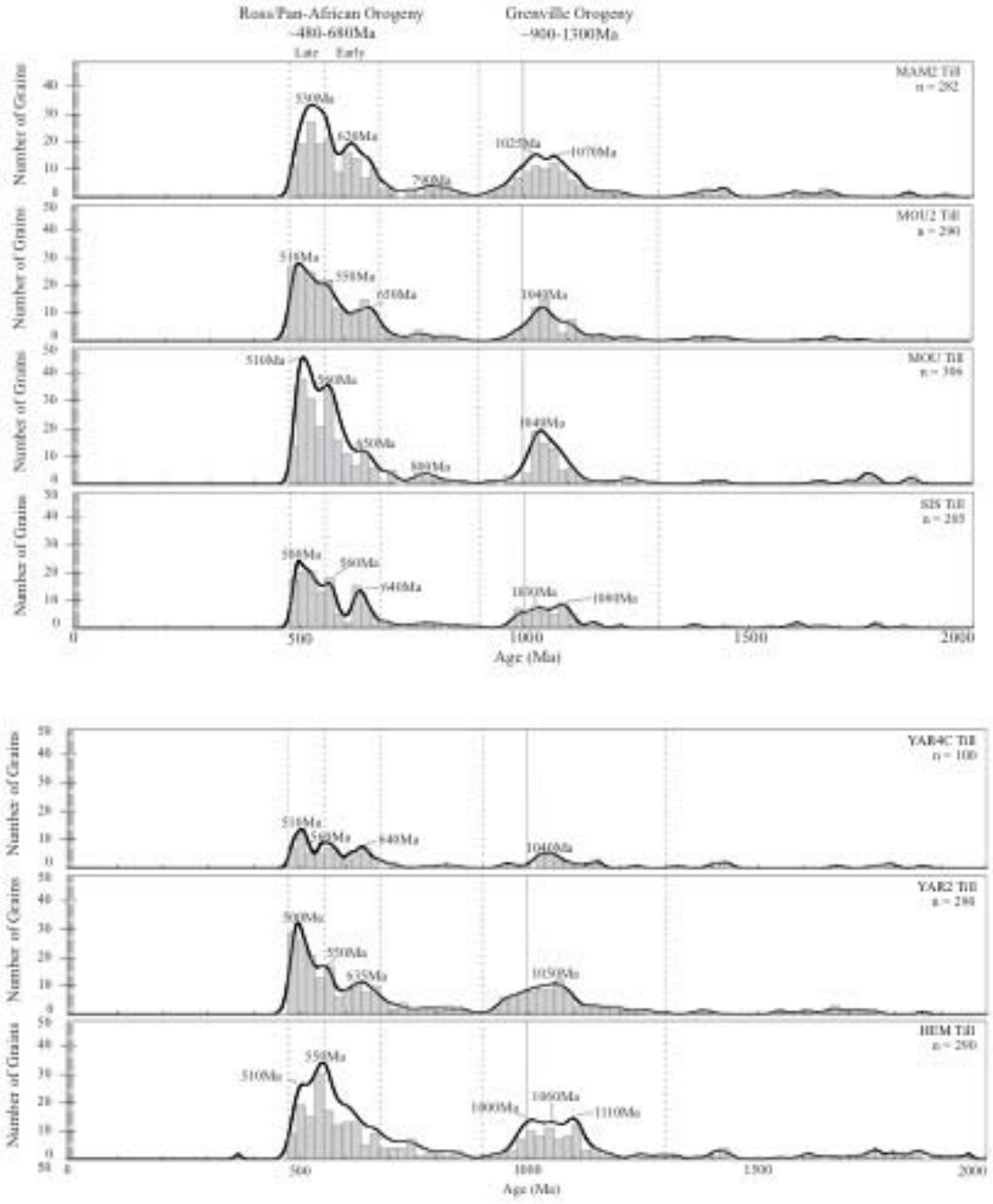


Figure 5. Probability density plots of zircon age populations in Pleistocene tills vs. Holocene tills; Top figure shows probability density plots of the peak zircon age populations in "younger" tills (MAM2, MOU2, MOU, SIS) that are Holocene in age. Bottom figure shows probability density plots of the peak zircon age populations in "older tills" (YAR4C, YAR2, HEM) that are Pleistocene in age. Bin widths are 20Ma and x-axis was cut off at 2Ga, as there were no significant older peaks. Dotted lines represent Ross and Grenville ranges taken from Licht et al. (2014) and Goodge et al. (2010).

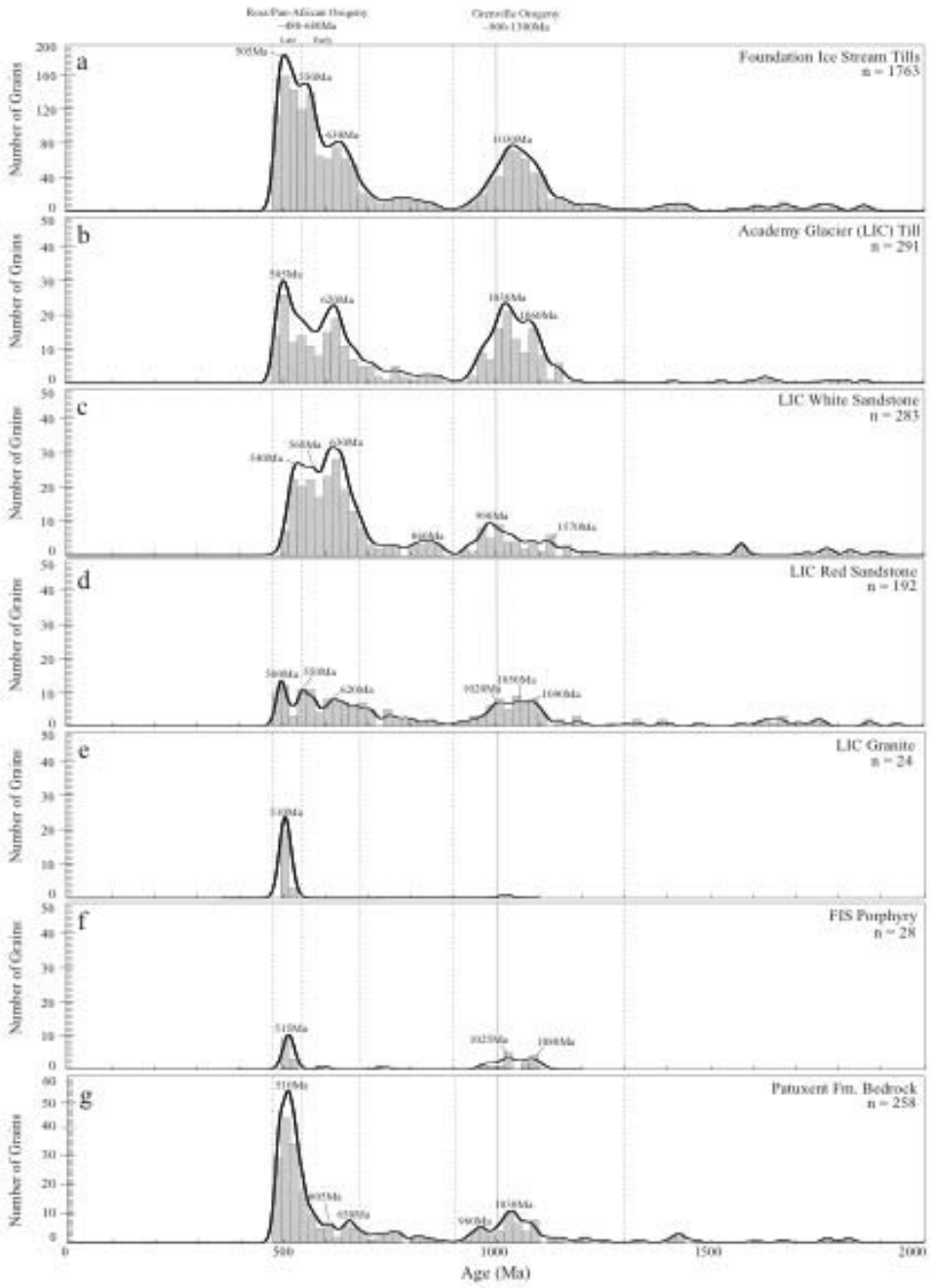


Figure 6. Probability density plots of zircon age populations in FIS tills, Academy Glacier tills, potential non-local sedimentary till sources, and igneous erratics in Academy Glacier and FIS deposits; Probability density plots show peak zircon age populations in FIS onshore tills (a), Academy Glacier (b), potential non-local sedimentary till sources (c, d), igneous erratics in Academy Glacier and FIS deposits (e, f), local Patuxent Formation bedrock for both the Foundation Ice Stream and Academy Glacier (g). Academy till has similar peaks to FIS tills but with different proportions, and to some ages in the sandstones (c,d) and local bedrock (g). 510Ma and 515Ma peaks in LIC Granite and FIS Porphyry are core ages, older peaks represent rims. Dotted lines represent Ross and Grenville ranges from Licht et al. (2014) & Goodge et al. (2010).

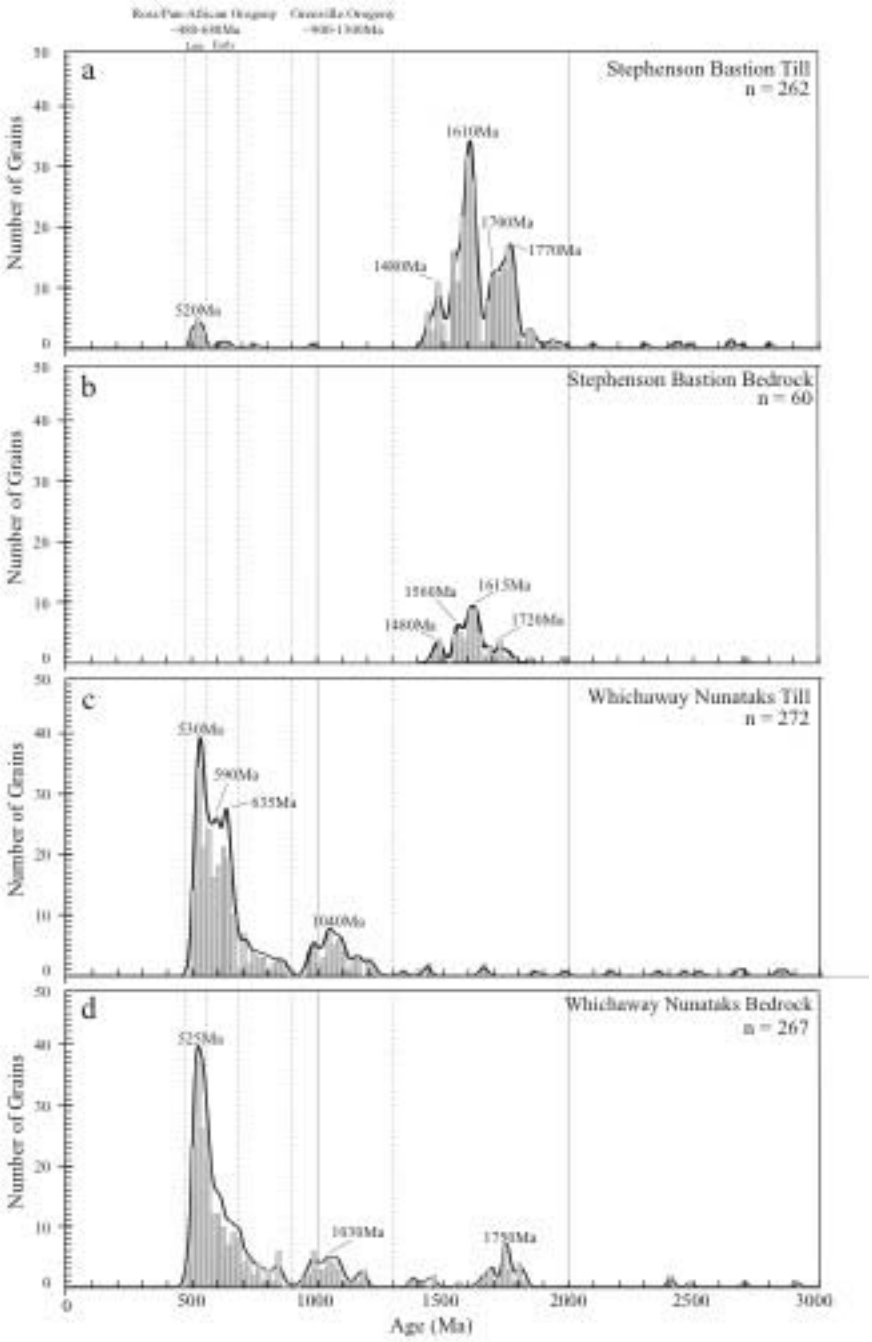


Figure 7. Probability density plots of zircon age populations in Recovery Glacier bedrock and tills; Probability density plots showing the peak zircon age populations in onshore till (a, c) and contrasting bedrock (b, d) on both sides of the Recovery Glacier. The bedrock of Stephenson Bastion (north side) and Whichaway Nunataks (south side) has similar age populations to the till. Bin widths are 20Ma and x-axis was cut off at 3Ga, as there were no significant older peaks. Dotted lines represent Ross and Grenville ranges taken from Licht et al. (2014) and Goodge et al. (2010).

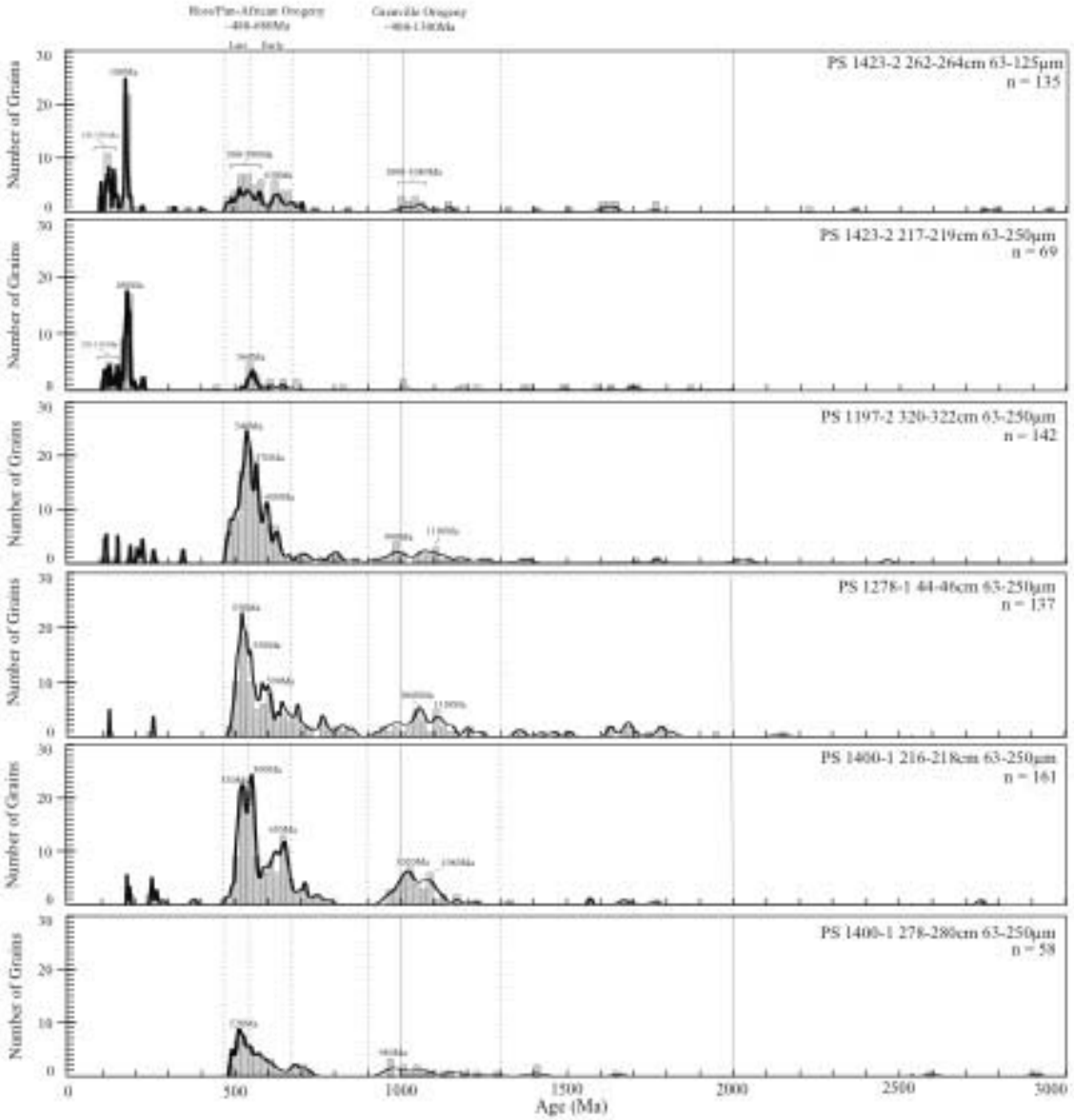


Figure 8. Probability density plots of zircon age populations in offshore tills Probability density plots showing the peak zircon age populations in offshore till. U-Pb ages in detrital zircons from offshore till samples show a general trend of decreasing Mesozoic ages from west to east. The western most core, PS 1423-2, has dominant Jurassic populations with secondary Cretaceous and Ross/Pan-African ages. Cores 1197-2 and 1278-1 have a high proportion of early Ross/Pan-African ages relative to Grenville ages, and have distributions similar to the Foundation. In PS 1400-1 the signal from Proterozoic age populations in onshore till indicative of the Slessor Glacier and northern side of the Recovery Glacier is muted, as most age peaks in the offshore till are Ross/Pan-African and Grenville. Bin widths are 20Ma and x-axis was cut off at 3Ga, as there were no significant older peaks. Dotted lines represent Ross and Grenville ranges taken from Licht et al. (2014) and Goodge et al. (2010).

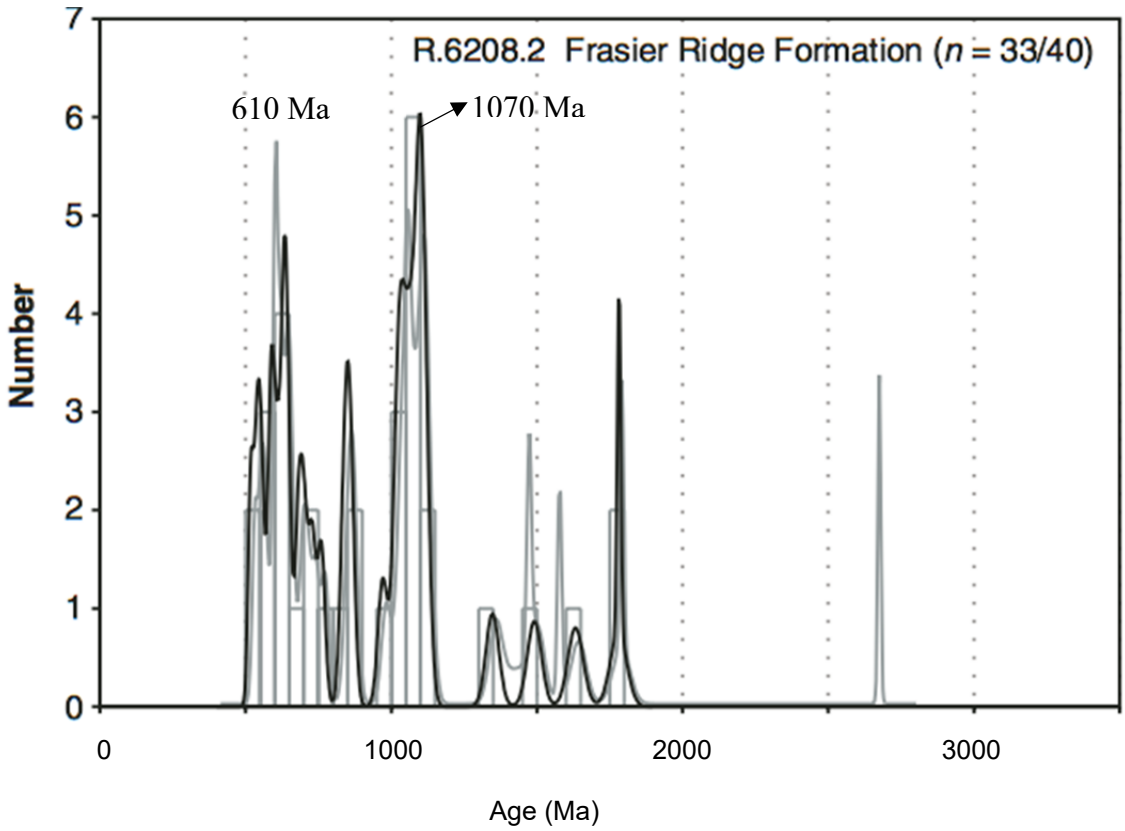


Figure 9. Probability density plot of zircon age populations in the Frasier Ridge Formation (Flowerdew et al., 2007)

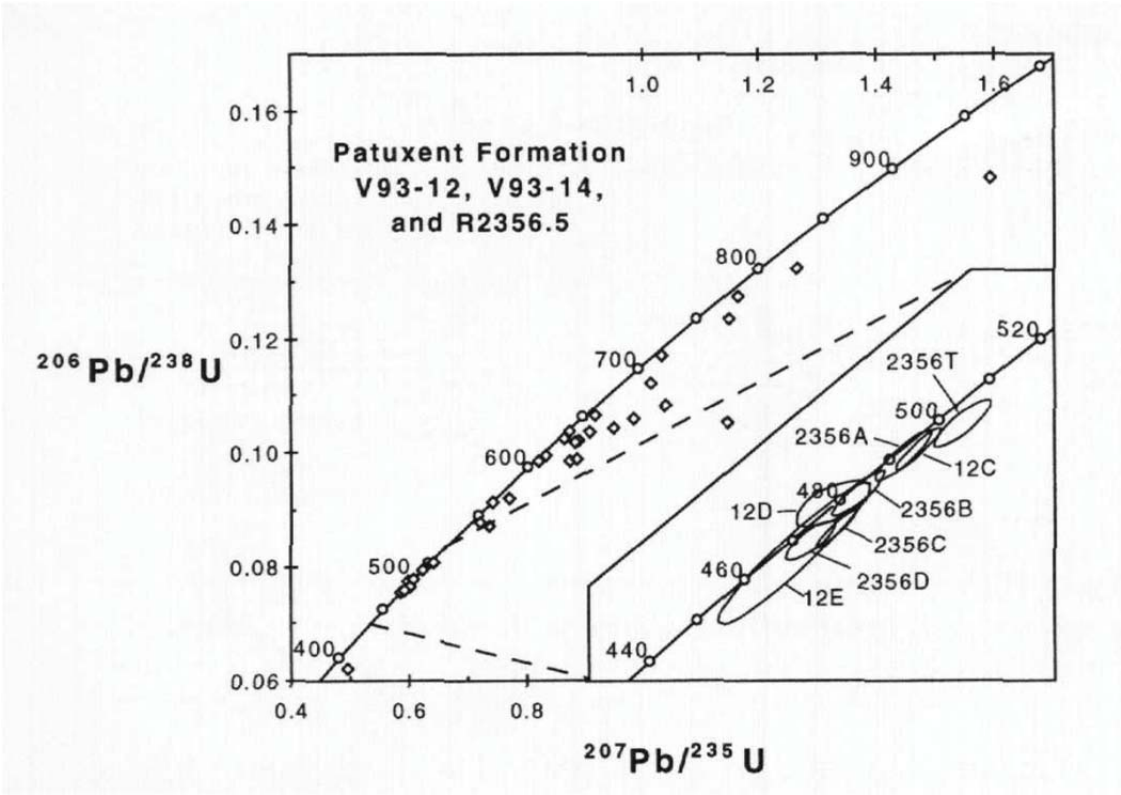


Figure 10. Concordia plot showing zircon age clusters in the Patuxent Formation (Rowell et al., 2001)

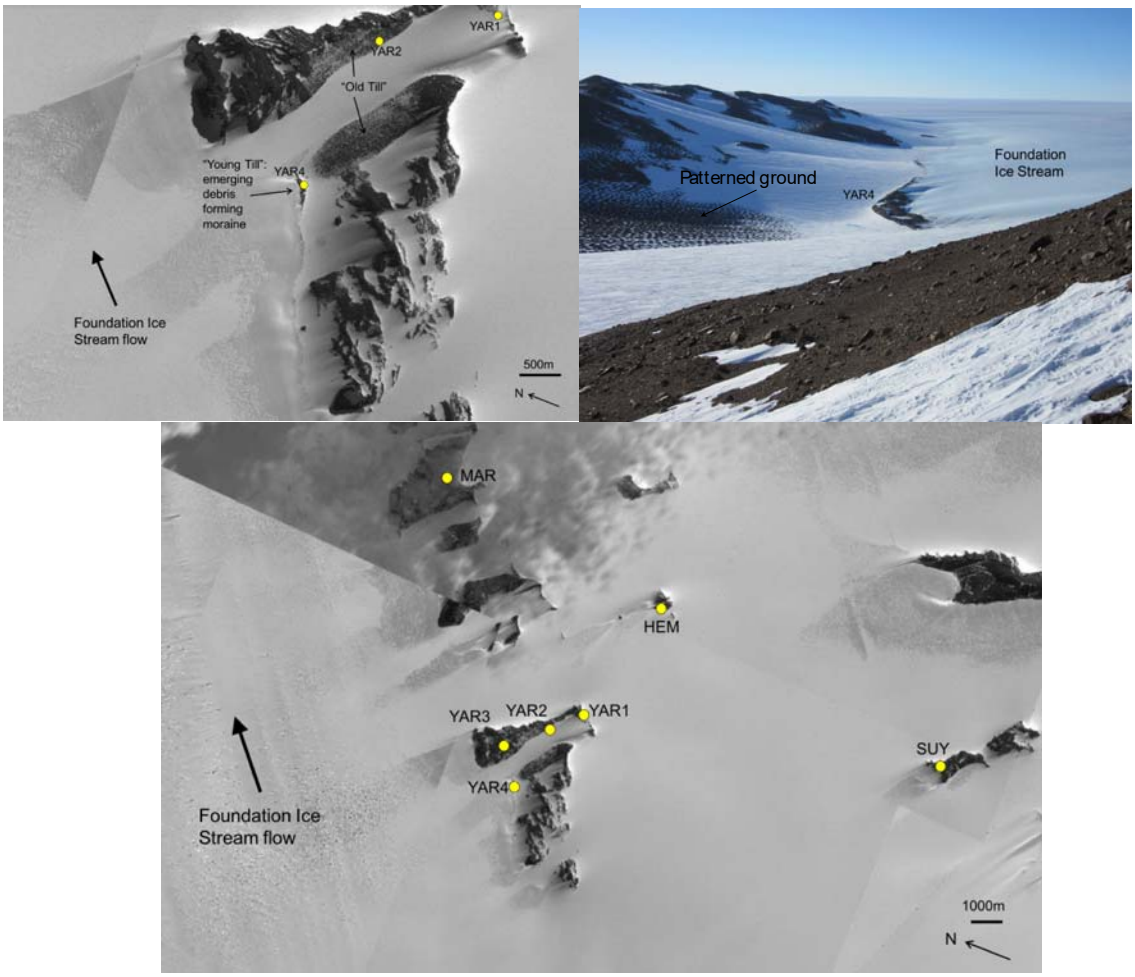


Figure 11. Location of "older" Pleistocene vs. "younger" Holocene tills in the Thomas Hills and Patuxent Range

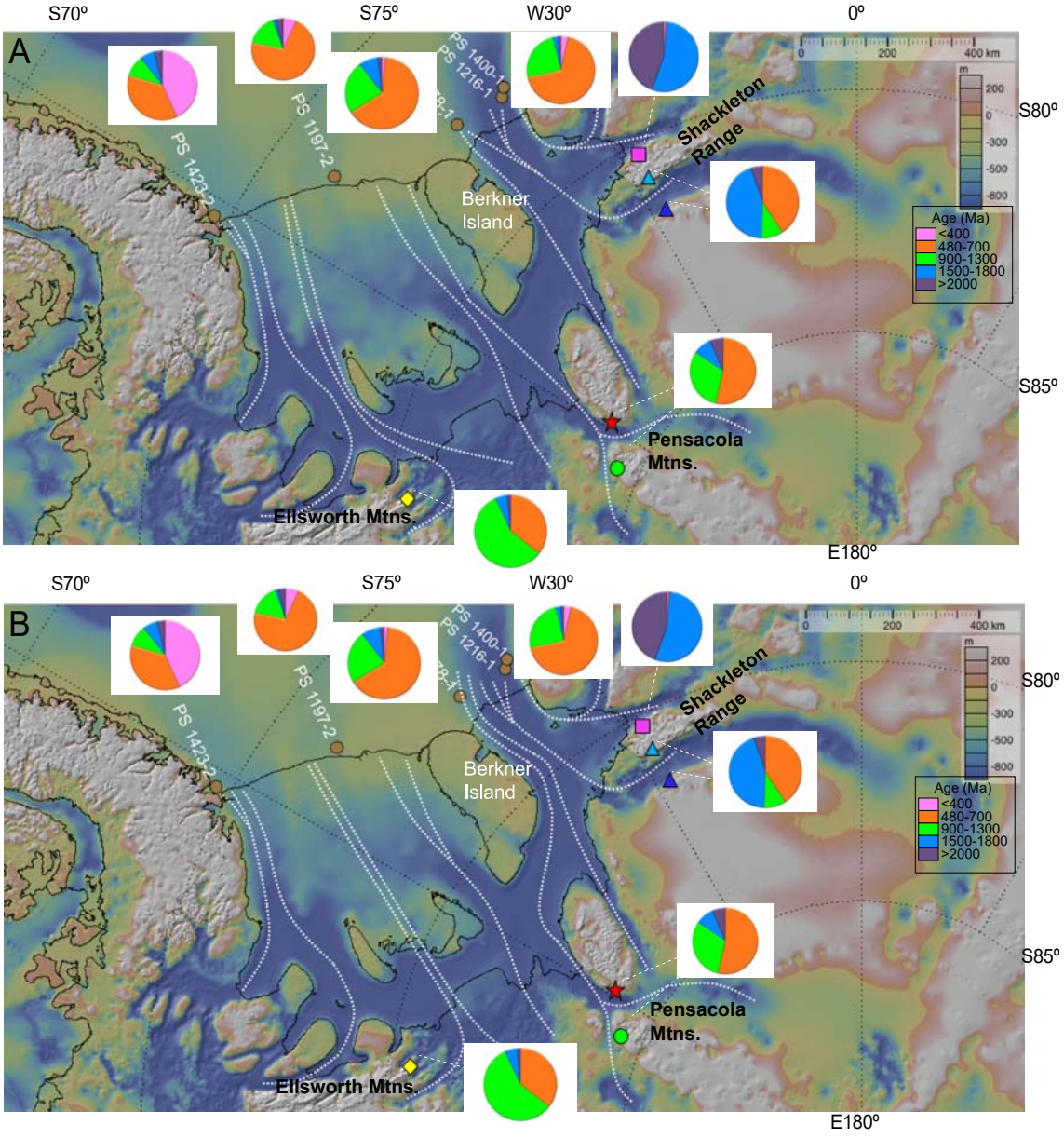


Figure 12. Ice stream reconstructions during LGM; Top figure (Scenario A) is the first scenario for ice stream reconstructions during LGM. A = Evans, B = Rutford, C = Institute, D = Institute/Moller, E = Foundation, F = Academy, G = Support Force, H = Recovery, I = Slessor, J = Bailey. Institute Ice Stream has more of a westerly flow and deposits till in between PS 1423-2 and PS 1197-2, allowing FIS to flow west around Berkner Island (BI) and Support Force and Recovery to dominate flow into Filchner Shelf. Bottom figure (Scenario B) is second scenario for ice stream reconstructions during LGM. The Institute Ice Stream has more of an easterly flow path and deposits till near PS 1197, forcing FIS into an easterly flow path around BI.

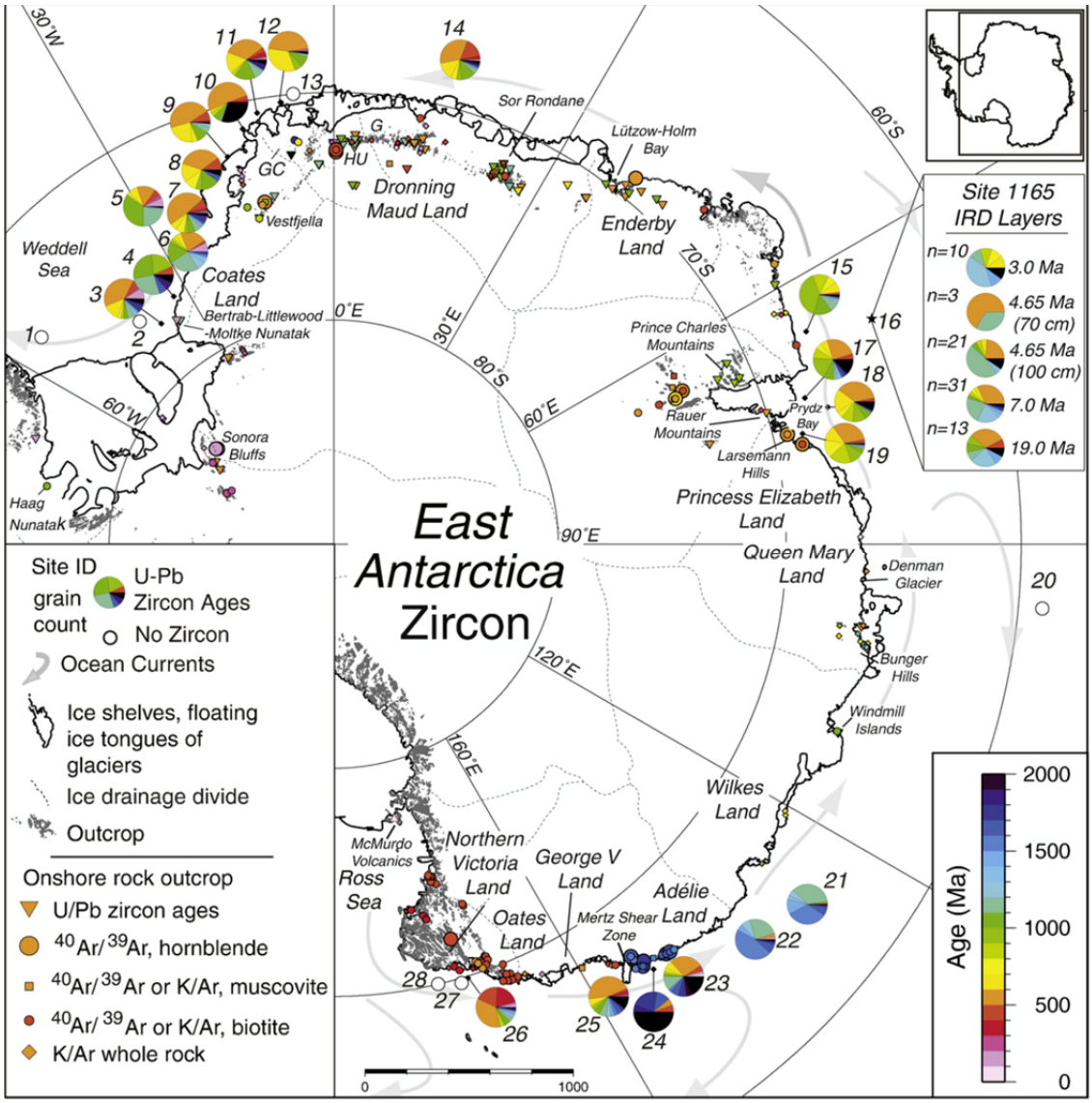


Figure 13. Zircon, biotite, and hornblende ages from around the continent (Pierce et al., 2014)

13a. U-Pb zircon chronometer

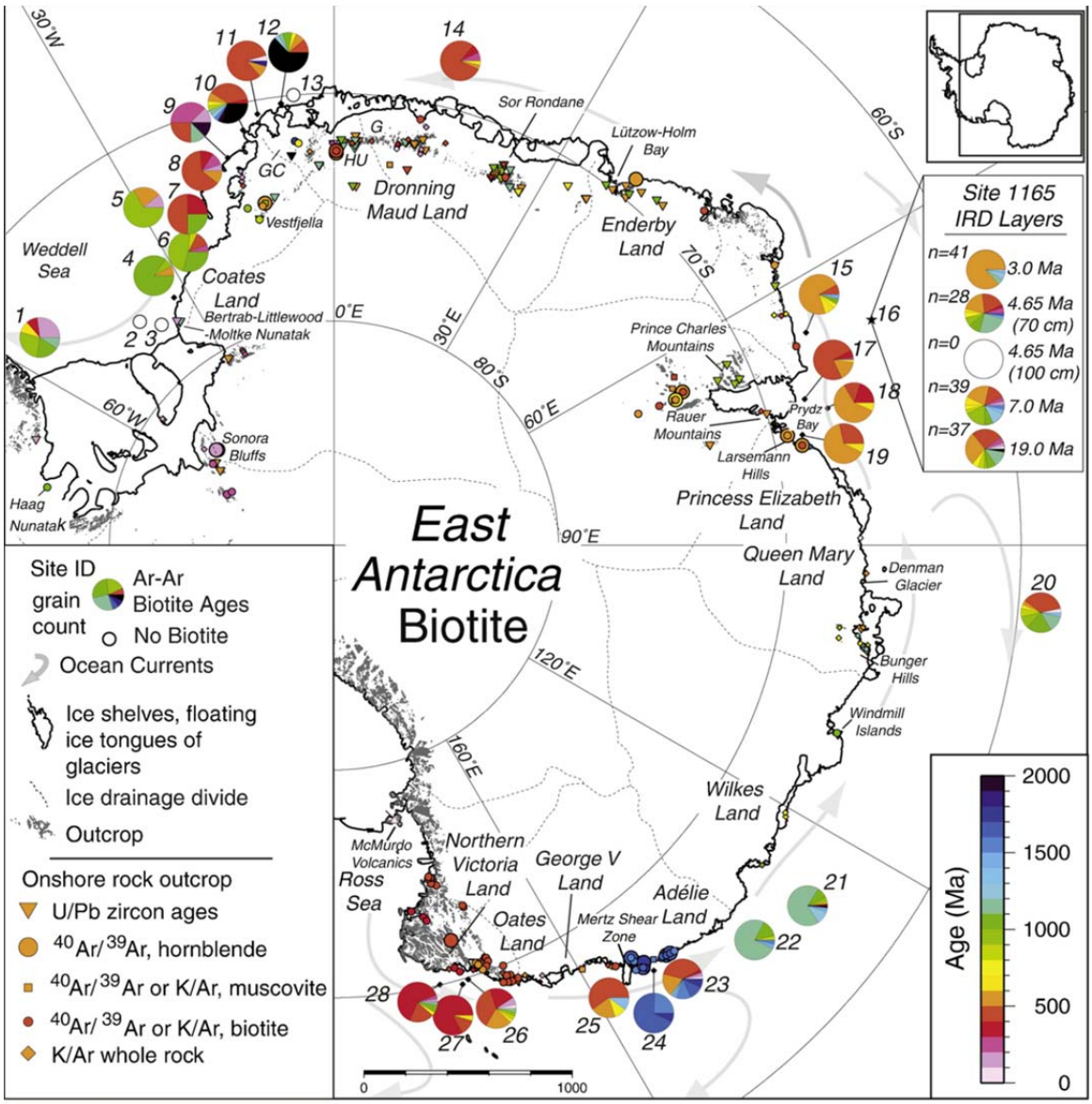


Figure 13. Zircon, biotite, and hornblende ages from around the continent (Pierce et al., 2014)

13b. $^{40}Ar/^{39}Ar$ biotite chronometer

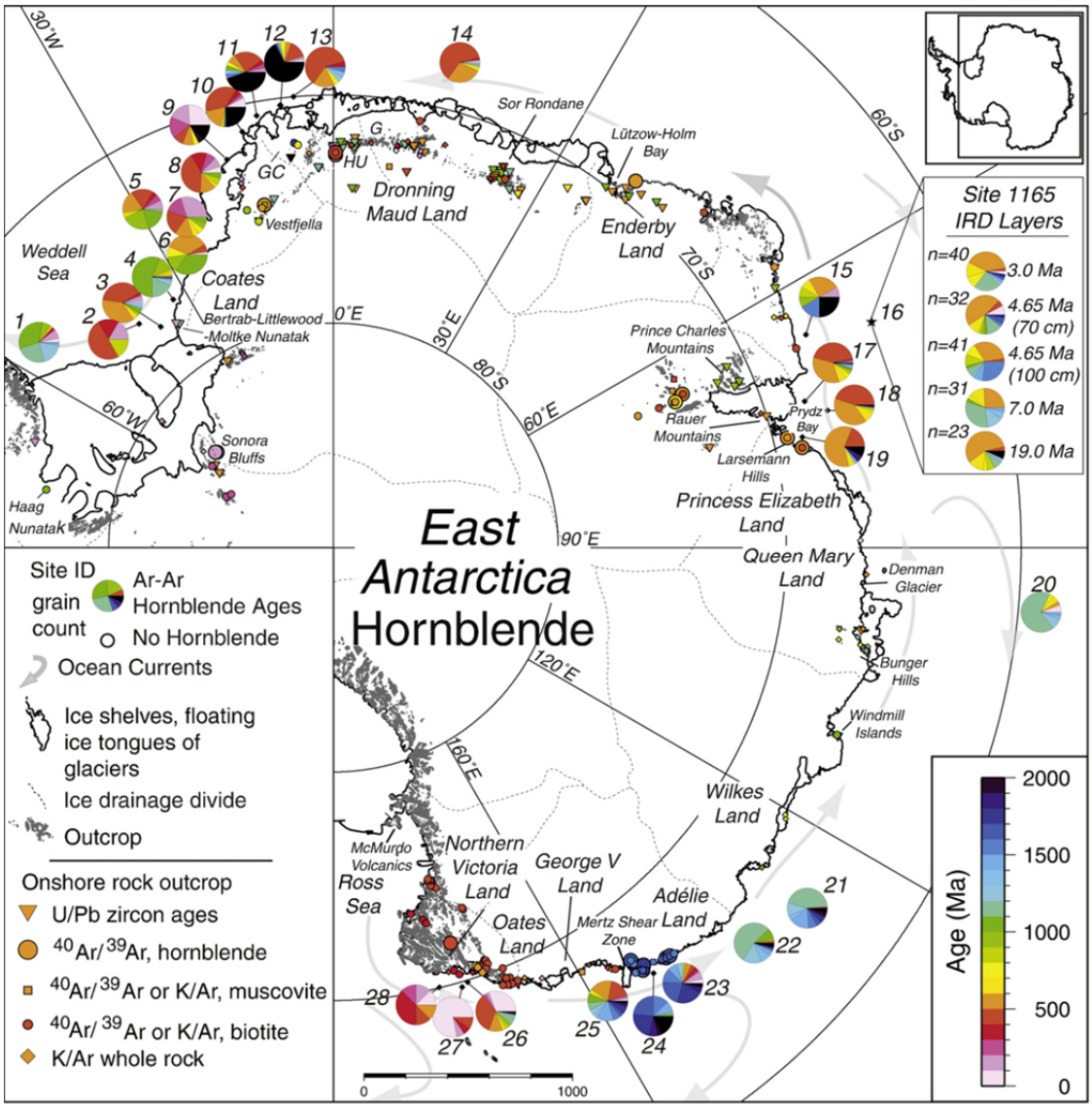


Figure 13. Zircon, biotite, and hornblende ages from around the continent (Pierce et al., 2014)

13c. $^{40}Ar/^{39}Ar$ hornblende chronometer

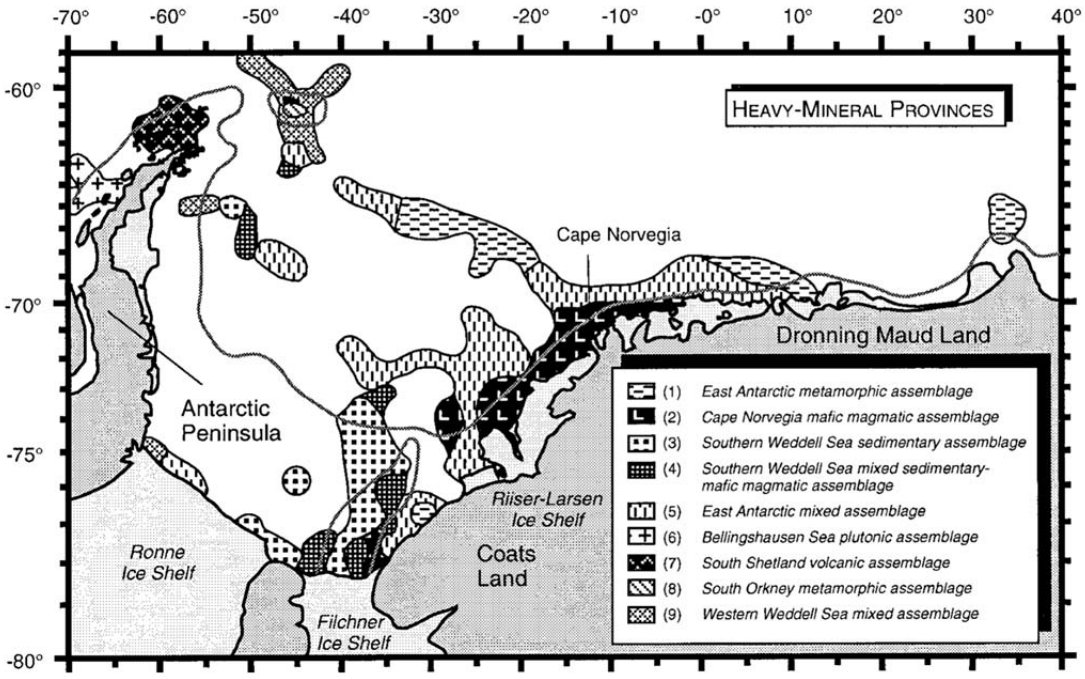


Figure 14. Distribution of heavy mineral assemblages (fine-sand fraction) in glacial-marine surface sediments (Diekmann & Kuhn, 1999).

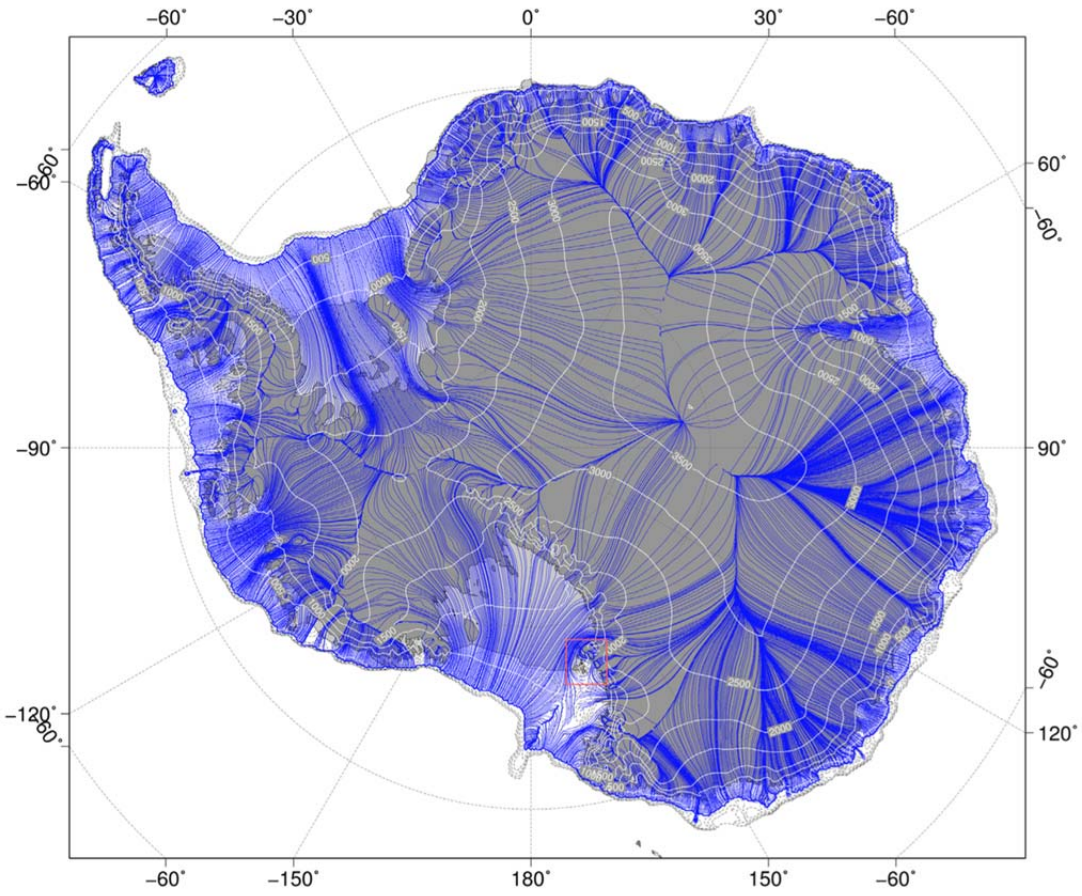


Figure 15. Modelled flow of the Antarctic ice sheet during the Last Glacial Maximum (Golledge et al., 2013)

Appendix A: Ten common, exotic, and bedrock cobble/pebbles chosen for U-Pb analysis

Of the 10 pebble/cobble samples, 3 represent the local bedrock that the Foundation Ice Stream, Academy Glacier, and Recovery Glacier transport. Gray fine-medium grained metasedimentary pebbles (YAR1 R-2) of the Patuxent Formation represent the local component in the Foundation Ice Stream and Academy Glacier (Appx. A-1). Since the Recovery Glacier has contrasting bedrock geology on both sides, pebbles from the tills inferred as bedrock based on angularity, abundance, and like composition to bedrock described in literature were taken. WAW R-9, a gray/brown fine-medium grained sandstone, represents the local component near the Whichaway Nunataks and has similar composition to the outcropping Whichaway Formation of the Beacon Supergroup described in Stephenson (1966) (Appx. A-2). STB R-8 represents the other side of the ice stream near Stephenson Bastion and is a greenschist, or metamorphosed sedimentary rock with chlorite crystals from low-grade metamorphism (Appx. A-3). STB R-8 has a similar composition to the Turnpike Bluff Group, composed of greenschists and described as the bedrock of Stephenson Bastion in Faure and Mensing (2010).

YAR4B SS R-7 and YAR4C SS R-4 are common rocks found in the pebble fraction of Foundation Ice Stream till deposits, which suggests a nearby source. YAR4B SS R-7 is a white fine-medium quartzose sandstone with portions of iron staining (Appx. A-4), while YAR4C SS R-4 is a white-brown quartzose sandstone without iron staining (Appx. A-5). These rocks were chosen to represent common detritus the Foundation Ice Stream is carrying. POR R-5 is a porphyry, or an igneous cobble consisting of coarse grained crystals in a fine-grained matrix, found in till deposits along the Foundation Ice

Stream (Appx. A-6). This uncommon lithology can offer insight into more distal source units.

LIC SS qtz R-3 and LIC SS red R-10 are common rocks found in the pebble fraction of Academy Glacier till deposits, which also suggests a proximal source. LIC SS qtz R-3 is a white-brown medium grained quartzose sandstone (Appx. A-7), while LIC SS red R-10 is a red medium-grained quartzose sandstone (Appx. A-8). Since they are ubiquitous in the pebble fraction, and the till has a reddish tint to it as well, they were chosen to represent common detritus the Academy Glacier is carrying. GR R-1, a granitic cobble, is an uncommon lithology found in this ice stream's till deposits that can also offer insights into source units that may not be in close proximity (Appx. A-9). Sample BRZ R-6 is a coarse-grained quartzose sandstone taken from bedrock of the Devonian Sandstone farther upstream (Appx. A-10). This cobble's lithology is common in the pebble fraction of Foundation Ice Stream and Academy Glacier tills, thus it was chosen to compare to till age populations.

Appendix A-1.

Appendix A-2.

Appendix A-3.

Appendix A-4.

Appendix A-5

Appendix A-6.

Appendix A-7.

Appendix A-8.

Appendix A-9.

Appendix A-10.

Appendix B: Optical properties used to identify and hand pick offshore zircons for U-Pb analysis

After LST and MEI separation, zircons were hand-picked from the 63-125 μm and 125-250 μm size fractions based on a variety of optical identification properties. All minerals from the heavy liquid separation were placed in petri dishes and partitioned into multiple sections. Under non-polarized light, grains that displayed a euhedral prismatic or rounded shape with high relief, adamantine luster, and colorless, light pink or light-yellow color were chosen. One of the most important properties to distinguish zircon from other minerals was very high birefringence under polarized light. This process was completed three times to ensure that cores produced an adequate number of grains to yield significant age populations. All cores yielded significant age populations except for PS 1216-1. After the identification process was completed, all grains were mounted on Copper tape to have backscattered electron images (BSE) and element maps created to verify their identity.

Appendix C: Statistical tests used to analyze interpreted U-Pb zircon ages

Interpretations are based on analyses that fulfill the discordance requirements and are displayed via Pb/U concordia diagrams and relative-age probability plots. Pb/U concordia diagrams show two decay systems ($^{238}U \rightarrow {}^{206}Pb$ and $^{235}U \rightarrow {}^{207}Pb$) and plot $^{206}Pb/U^{238}$ versus $^{207}Pb/U^{235}$ as a function of age. Relative-age probability plots show the age and its uncertainty for each analysis as a normal distribution. Summing all ages and errors produces the curve for the sample. (Paulsen et al., 2011). The peak heights of the age distribution curves are a function of the number of grains at a particular age and the precision associated with that analysis (Bader, 2014).

Interpreted ages were also analyzed using Kernel Density Estimation (KDE). Relative-age probability plots are a commonly used method to display interpreted zircon ages, however, it has been argued by Rudge (2008) and Vermeesch (2012) that using Kernel Density Estimation can be a powerful and potentially more robust tool. The KDE is a function that stacks a Gaussian bell curve on top of each zircon age measurement, whose standard deviation is determined by the local probability density (Vermeesch, 2012). Relative age probability plots also use a Gaussian bell curve, but base standard deviation off of the analytical precision of the instrument used (Vermeesch, 2012). Using DensityPlotter as suggested in Vermeesch (2012), the KDE was carried out for all 21 samples collected in 2014.

The Kolmogorov-Smirnov test (K-S test) was also used to analyze the interpreted ages. The K-S test compares zircon age distributions to determine if two samples could have been derived from the same parent population at a level of 95% confidence. The test uses a stepwise cumulative probability distribution of the measured ages and calculates a

test statistic based on the maximum distance between the distributions being compared (Sircombe and Hazelton, 2004). Cumulative probability density plots are one result of the K-S test, which aid as another tool to visually compare age distributions between individual and groups of samples. The K-S test was run for all 21 samples sent for U-Pb dating, and cumulative probability plots were created to help compare groups of samples.

Appendix D: U-Pb analysis results of detrital zircons

Onshore Zircons

Foundation Ice Stream Tills

SIS

					Isotope ratios							Apparent ages (Ma)						
U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
469	33620	1.9	17.4045	0.9	0.6213	2.1	0.0784	1.9	0.91	486.7	9.0	490.6	8.2	509.1	19.2	486.7	9.0	95.6
394	34524	1.5	17.4616	0.8	0.6210	2.0	0.0786	1.8	0.92	488.0	8.7	490.4	7.8	501.9	17.1	488.0	8.7	97.2
290	35911	2.1	17.3547	1.0	0.6250	2.2	0.0787	1.9	0.90	488.2	9.1	493.0	8.4	515.4	21.1	488.2	9.1	94.7
304	152410	2.2	17.0585	0.8	0.6430	2.4	0.0796	2.3	0.94	493.4	10.7	504.2	9.6	553.1	18.0	493.4	10.7	89.2
268	24889	1.7	17.6863	0.9	0.6212	2.7	0.0797	2.5	0.94	494.2	11.9	490.6	10.3	473.7	20.6	494.2	11.9	104.3
281	43159	2.1	17.4048	0.9	0.6323	2.6	0.0798	2.4	0.94	495.0	11.5	497.5	10.1	509.0	18.8	495.0	11.5	97.2
400	527072	1.9	17.4714	1.0	0.6300	2.5	0.0798	2.3	0.92	495.1	11.0	496.1	9.8	500.7	21.3	495.1	11.0	98.9
675	77469	1.9	17.4002	0.7	0.6329	1.7	0.0799	1.5	0.92	495.3	7.3	497.9	6.6	509.6	14.8	495.3	7.3	97.2
284	43392	2.3	17.2674	0.8	0.6382	2.4	0.0799	2.2	0.95	495.7	10.6	501.2	9.3	526.5	16.8	495.7	10.6	94.1
1015	590530	3.5	17.5368	0.7	0.6287	1.8	0.0800	1.7	0.92	495.9	8.1	495.3	7.2	492.4	15.7	495.9	8.1	100.7
747	75897	2.4	17.4163	0.7	0.6340	2.3	0.0801	2.2	0.95	496.6	10.3	498.6	9.0	507.6	16.1	496.6	10.3	97.8
139	74719	2.3	17.4967	1.2	0.6315	2.7	0.0801	2.5	0.90	496.9	11.8	497.0	10.7	497.5	25.7	496.9	11.8	99.9
822	37517	1.9	17.5597	0.6	0.6302	2.0	0.0803	1.9	0.95	497.7	9.3	496.2	8.0	489.5	13.6	497.7	9.3	101.7
744	93134	2.4	17.6274	0.7	0.6294	1.9	0.0805	1.8	0.94	498.9	8.7	495.7	7.6	481.0	14.9	498.9	8.7	103.7
380	170006	0.7	17.3861	0.6	0.6381	1.9	0.0805	1.8	0.95	498.9	8.8	501.1	7.6	511.4	13.3	498.9	8.8	97.5
496	431515	3.1	17.2960	0.9	0.6416	2.5	0.0805	2.3	0.94	499.0	11.0	503.3	9.7	522.8	18.8	499.0	11.0	95.4
111	27304	2.1	17.4050	1.2	0.6384	3.4	0.0806	3.1	0.93	499.6	15.1	501.3	13.3	509.0	26.7	499.6	15.1	98.2
278	38317	2.4	17.4068	0.8	0.6392	2.3	0.0807	2.2	0.94	500.3	10.4	501.8	9.1	508.8	17.9	500.3	10.4	98.3
395	46010	1.3	17.1621	0.9	0.6485	2.4	0.0807	2.2	0.93	500.4	10.5	507.5	9.4	539.9	19.2	500.4	10.5	92.7
370	58869	2.0	17.2259	0.9	0.6464	2.3	0.0808	2.2	0.93	500.7	10.4	506.3	9.3	531.8	19.1	500.7	10.4	94.2
163	15737	2.1	17.4777	1.0	0.6374	2.9	0.0808	2.7	0.94	500.9	12.9	500.7	11.3	499.9	22.3	500.9	12.9	100.2
232	69830	0.9	17.3215	0.8	0.6435	2.8	0.0808	2.7	0.96	501.1	13.2	504.4	11.3	519.6	16.6	501.1	13.2	96.4
304	34431	5.3	17.5574	0.9	0.6349	3.1	0.0808	3.0	0.96	501.2	14.3	499.1	12.2	489.8	19.3	501.2	14.3	102.3
285	57954	2.0	17.2498	0.9	0.6483	2.2	0.0811	2.0	0.92	502.7	9.8	507.4	8.8	528.7	19.0	502.7	9.8	95.1
557	919744	2.2	17.5748	0.6	0.6376	2.0	0.0813	1.9	0.95	503.7	9.2	500.8	7.9	487.7	13.8	503.7	9.2	103.3
293	38658	2.9	17.1319	1.0	0.6541	2.8	0.0813	2.6	0.94	503.7	12.7	511.0	11.2	543.7	21.2	503.7	12.7	92.6
350	68034	2.5	17.1687	0.8	0.6559	2.3	0.0817	2.1	0.94	506.1	10.3	512.1	9.1	539.0	17.2	506.1	10.3	93.9
156	25085	2.4	17.2267	1.1	0.6550	3.1	0.0818	2.9	0.93	507.0	14.2	511.5	12.5	531.6	24.2	507.0	14.2	95.4
345	71475	1.7	17.5823	0.8	0.6420	2.3	0.0819	2.2	0.94	507.3	10.7	503.6	9.2	486.7	16.9	507.3	10.7	104.2
80	172018	1.8	17.4123	1.3	0.6535	3.3	0.0825	3.1	0.92	511.2	15.1	510.6	13.4	508.1	27.9	511.2	15.1	100.6
196	42204	2.3	17.0803	0.9	0.6677	2.4	0.0827	2.2	0.94	512.3	11.1	519.3	9.8	550.3	18.6	512.3	11.1	93.1
201	36125	2.6	17.4418	0.9	0.6545	3.0	0.0828	2.9	0.96	512.8	14.1	511.2	12.0	504.4	19.2	512.8	14.1	101.7
287	47512	2.5	17.2537	0.8	0.6646	1.9	0.0832	1.8	0.91	515.0	8.8	517.4	7.9	528.2	17.2	515.0	8.8	97.5
321	104091	1.7	17.3386	0.9	0.6622	2.6	0.0833	2.5	0.94	515.6	12.2	515.9	10.6	517.4	20.0	515.6	12.2	99.7
739	76317	3.6	17.3156	0.6	0.6658	2.1	0.0836	2.0	0.96	517.7	10.2	518.2	8.7	520.3	13.1	517.7	10.2	99.5
249	60235	1.9	17.1896	0.9	0.6712	2.5	0.0837	2.3	0.93	518.1	11.6	521.5	10.2	536.4	19.9	518.1	11.6	96.6
500	55776	2.7	17.2846	0.7	0.6690	2.1	0.0839	2.0	0.93	519.1	9.8	520.1	8.6	524.2	16.4	519.1	9.8	99.0
319	37523	1.7	17.3587	0.8	0.6677	2.0	0.0841	1.9	0.93	520.3	9.4	519.3	8.2	514.9	16.9	520.3	9.4	101.1
341	503720	3.6	17.1455	0.8	0.6772	2.3	0.0842	2.1	0.94	521.2	10.7	525.1	9.3	542.0	16.6	521.2	10.7	96.2
837	577050	14.1	17.1539	0.9	0.6777	2.1	0.0843	1.9	0.90	521.8	9.6	525.4	8.7	540.9	20.1	521.8	9.6	96.5
1160	204123	7.2	17.2391	0.7	0.6762	2.1	0.0845	2.0	0.94	523.2	10.1	524.5	8.7	530.1	15.3	523.2	10.1	98.7
296	42560	2.5	17.2403	0.9	0.6764	2.2	0.0846	2.0	0.90	523.3	10.1	524.6	9.1	529.9	20.8	523.3	10.1	98.8
390	143445	7.4	17.4393	0.9	0.6691	2.2	0.0846	2.1	0.92	523.7	10.4	520.1	9.1	504.7	18.9	523.7	10.4	103.8
247	54436	2.0	17.1014	1.0	0.6825	3.0	0.0847	2.8	0.94	523.8	14.0	528.3	12.2	547.6	22.3	523.8	14.0	95.7
160	120172	3.5	17.3830	1.1	0.6729	3.5	0.0848	3.3	0.95	524.9	16.5	522.4	14.1	511.8	24.0	524.9	16.5	102.6
211	12311	2.9	17.4444	0.9	0.6709	2.1	0.0849	1.8	0.89	525.2	9.2	521.2	8.4	504.0	20.6	525.2	9.2	104.2
262	146430	1.3	16.8661	1.0	0.6939	2.9	0.0849	2.7	0.93	525.2	13.5	535.2	12.0	577.8	22.7	525.2	13.5	90.9
199	17107	3.4	17.3032	1.1	0.6780	3.0	0.0851	2.8	0.93	526.4	14.0	525.6	12.2	521.9	24.6	526.4	14.0	100.9
390	68674	2.1	17.1953	0.6	0.6868	2.3	0.0857	2.2	0.96	529.8	11.1	530.9	9.4	535.6	14.2	529.8	11.1	98.9
886	75117	2.1	16.9965	0.8	0.6962	2.2	0.0858	2.1	0.94	530.8	10.7	536.5	9.4	561.0	16.8	530.8	10.7	94.6
238	38332	2.4	16.9283	0.9	0.7034	3.0	0.0864	2.8	0.95	534.0	14.4	540.8	12.4	569.8	19.5	534.0	14.4	93.7
1259	110063	2.2	17.0719	0.7	0.6980	2.0	0.0864	1.9	0.94	534.3	9.8	537.6	8.4	551.4	14.7	534.3	9.8	96.9
220	43899	1.4	17.0708	0.8	0.6983	2.6	0.0865	2.4	0.95	534.5	12.4	537.8	10.7	551.5	17.9	534.5	12.4	96.9
332	43750	3.5	17.3928	0.9	0.6854	2.4	0.0865	2.3	0.93	534.6	11.7	530.0	10.1	510.6	19.5	534.6	11.7	104.7
326	87939	2.4	17.0067	0.7	0.7046	2.5	0.0869	2.3	0.95	537.2	12.0	541.5	10.3	559.7	16.1	537.2	12.0	96.0
417	38706	2.6	16.9805	0.7	0.7084	2.2	0.0872	2.1	0.95	539.2	10.9	543.8	9.4	563.0	15.4	539.2	10.9	95.8
235	44685	0.5	17.1372	0.8	0.7028	2.1	0.0873	1.9	0.93	539.8	9.9	540.4	8.6	543.0	16.5	539.8	9.9	99.4
122	17199	1.5	16.9561	0.9	0.7156	3.2	0.0880	3.0	0.95	543.7	15.8	548.1	13.4	566.2	20.6	543.7	15.8	96.0
181	48060	3.1	16.7970	1.1	0.7247	2.9	0.0883	2.7	0.93	545.4	14.1	553.4	12.3	586.7	22.9	545.4	14.1	93.0
131	539817	3.9	16.8720	1.1	0.7226	2.5	0.0884	2.2	0.90	546.2	11.8	552.2	10.6	577.0	23.3	546.2	11.8	94.7
1032	180316	1.1	17.1722	0.7	0.7106	2.1	0.0885	2.0	0.95	546.7	10.7	545.1	9.1	538.6	14.4	546.7	10.7	101.5
117	104013	2.0	16.8904	1.2	0.7226	3.4	0.0885	3.1	0.93	546.8	16.4	552.2	14.3	574.7	26.8	546.8	16.4	95.1
287	84778	3.2	16.8405	0.8	0.7250	2.5	0.0886	2.4	0.95	547.0	12.4	553.6	10.7	581.1	17.4	547.0	12.4	94.1
754	64845	2.4	17.2010	0.6	0.7132	2.0	0.0890	1.9	0.95	549.5	10.0	546.7	8.4	534.9	13.2	549.5	10.0	102.7
224	23068	1.9	17.2371	0.9	0.7130	2.3	0.0891	2.1	0.91	550.4	11.0	546.5	9.6	530.3	20.1	550.4	11.0	103.8

544	42342	1.7	17.0236	0.6	0.7230	2.2	0.0893	2.2	0.96	551.2	11.4	552.5	9.6	557.6	13.5	551.2	11.4	98.9
126	91799	117.0	16.8281	1.0	0.7356	3.1	0.0898	2.9	0.94	554.2	15.5	559.8	13.3	582.7	22.0	554.2	15.5	95.1
226	257306	0.9	16.9101	0.9	0.7353	2.9	0.0902	2.8	0.95	556.6	14.7	559.7	12.5	572.1	19.4	556.6	14.7	97.3
400	75825	21.1	16.9266	0.9	0.7369	2.8	0.0905	2.7	0.95	558.3	14.5	560.6	12.3	570.0	19.4	558.3	14.5	97.9
323	967158	0.7	16.5438	1.0	0.7552	3.0	0.0906	2.8	0.94	559.2	14.9	571.2	12.9	619.5	21.6	559.2	14.9	90.3
543	229707	5.7	16.9437	0.8	0.7401	2.6	0.0909	2.5	0.95	561.1	13.5	562.5	11.4	567.8	17.6	561.1	13.5	98.8
335	63635	4.3	17.0165	0.8	0.7397	2.6	0.0913	2.5	0.95	563.1	13.4	562.2	11.4	558.5	18.4	563.1	13.4	100.8
1080	878873	3.1	17.0822	0.7	0.7388	1.9	0.0915	1.7	0.92	564.6	9.4	561.7	8.1	550.0	15.8	564.6	9.4	102.6
146	24348	1.9	16.7984	1.0	0.7516	2.7	0.0916	2.5	0.92	564.8	13.6	569.2	11.9	586.5	22.7	564.8	13.6	96.3
176	59872	2.2	16.8266	0.8	0.7547	3.4	0.0921	3.3	0.97	568.0	17.9	571.0	14.8	582.9	17.5	568.0	17.9	97.4
412	68467	1.2	16.7896	1.0	0.7579	2.0	0.0923	1.7	0.87	569.0	9.3	572.8	8.6	587.6	20.8	569.0	9.3	96.8
521	60667	5.8	16.6274	0.8	0.7667	1.9	0.0925	1.7	0.92	570.0	9.5	577.9	8.3	608.6	16.3	570.0	9.5	93.7
297	43557	2.7	16.7877	1.0	0.7594	2.6	0.0925	2.4	0.92	570.1	12.9	573.7	11.3	587.9	22.0	570.1	12.9	97.0
437	95618	7.0	17.0630	0.7	0.7473	2.1	0.0925	2.0	0.94	570.2	10.9	566.6	9.2	552.5	15.5	570.2	10.9	103.2
237	334508	2.9	16.8126	0.8	0.7586	2.5	0.0925	2.4	0.95	570.3	13.0	573.2	11.0	584.7	17.4	570.3	13.0	97.5
554	259890	3.8	16.8632	0.7	0.7564	2.4	0.0925	2.3	0.96	570.4	12.7	572.0	10.7	578.2	15.6	570.4	12.7	98.7
315	124256	1.8	16.8140	0.7	0.7588	2.2	0.0925	2.1	0.94	570.5	11.2	573.3	9.6	584.5	16.0	570.5	11.2	97.6
296	136764	1.4	17.1026	0.9	0.7475	2.2	0.0927	2.0	0.91	571.6	11.0	566.8	9.7	547.4	20.6	571.6	11.0	104.4
365	64422	1.6	16.8720	1.0	0.7599	2.6	0.0930	2.4	0.92	573.1	12.9	573.9	11.2	577.0	21.3	573.1	12.9	99.3
159	49563	0.6	16.9843	0.9	0.7584	3.4	0.0934	3.2	0.96	575.8	17.8	573.1	14.7	562.6	19.6	575.8	17.8	102.3
163	18359	1.1	16.5682	1.1	0.7788	3.2	0.0936	3.1	0.94	576.7	16.9	584.8	14.4	616.4	23.3	576.7	16.9	93.6
758	202304	16.6	16.6364	0.7	0.7790	2.0	0.0940	1.9	0.94	579.1	10.5	584.9	9.1	607.5	15.6	579.1	10.5	95.3
642	154505	2.2	16.6734	0.7	0.7781	2.1	0.0941	2.0	0.95	579.7	10.9	584.4	9.2	602.7	14.5	579.7	10.9	96.2
476	42920	2.6	16.9246	0.7	0.7690	2.3	0.0944	2.2	0.96	581.5	12.3	579.2	10.2	570.3	14.7	581.5	12.3	102.0
464	561250	2.9	16.7263	0.7	0.7792	2.6	0.0945	2.5	0.96	582.2	13.8	585.0	11.5	595.8	16.1	582.2	13.8	97.7
320	119497	0.8	16.4400	1.0	0.8020	2.5	0.0956	2.2	0.91	588.7	12.6	598.0	11.1	633.2	22.3	588.7	12.6	93.0
283	99333	1.4	16.5148	0.8	0.8041	2.4	0.0963	2.2	0.94	592.7	12.5	599.1	10.7	623.3	17.9	592.7	12.5	95.1
190	19168	1.3	16.4102	1.0	0.8118	2.6	0.0966	2.4	0.92	594.6	13.6	603.5	11.8	637.1	22.5	594.6	13.6	93.3
157	24900	1.3	16.3334	1.0	0.8467	2.7	0.1003	2.5	0.93	616.2	14.5	622.8	12.4	647.1	21.1	616.2	14.5	95.2
286	51823	2.3	16.4470	0.9	0.8462	2.8	0.1009	2.6	0.94	619.9	15.6	622.6	13.0	632.2	20.4	619.9	15.6	98.1
333	91333	3.5	16.6367	0.8	0.8409	2.2	0.1015	2.0	0.92	623.0	12.1	619.7	10.2	607.4	18.2	623.0	12.1	102.6
424	95649	3.0	16.4290	0.9	0.8567	2.3	0.1021	2.2	0.92	626.6	12.9	628.3	11.0	634.6	19.8	626.6	12.9	98.7
520	115742	22.4	16.4784	0.7	0.8547	1.9	0.1021	1.8	0.93	627.0	10.6	627.2	9.0	628.1	15.7	627.0	10.6	99.8
1027	343225	3.9	16.4338	0.7	0.8601	2.2	0.1025	2.1	0.96	629.1	12.9	630.2	10.5	634.0	14.2	629.1	12.9	99.2
127	131947	2.3	16.6972	1.0	0.8466	3.0	0.1025	2.8	0.94	629.2	17.0	622.8	14.0	599.6	21.8	629.2	17.0	104.9
237	38143	2.6	16.6409	1.0	0.8515	3.1	0.1028	2.9	0.94	630.6	17.5	625.5	14.4	606.9	21.9	630.6	17.5	103.9
425	122616	2.9	16.4601	0.8	0.8636	2.1	0.1031	1.9	0.92	632.5	11.5	632.1	9.8	630.5	17.4	632.5	11.5	100.3
341	75150	2.4	16.3805	0.7	0.8680	2.4	0.1031	2.3	0.96	632.7	13.9	634.5	11.4	641.0	15.1	632.7	13.9	98.7
99	74807	1.1	16.0046	1.3	0.8895	2.7	0.1032	2.4	0.89	633.4	14.7	646.1	13.1	690.7	26.8	633.4	14.7	91.7
700	350534	6.8	16.4178	0.6	0.8694	2.1	0.1035	2.0	0.96	635.1	12.0	635.3	9.7	636.1	12.7	635.1	12.0	99.8
271	28866	2.7	16.2592	1.0	0.8793	3.6	0.1037	3.5	0.96	636.0	21.0	640.6	17.2	656.9	21.8	636.0	21.0	96.8
493	190873	4.5	16.5447	0.7	0.8647	2.4	0.1038	2.3	0.96	636.4	13.7	632.7	11.1	619.4	14.8	636.4	13.7	102.7
1026	65718	3.1	16.2726	0.5	0.8812	1.7	0.1040	1.6	0.96	637.8	10.0	641.6	8.2	655.1	10.8	637.8	10.0	97.4
49	26122	4.1	16.0094	1.5	0.8957	4.6	0.1040	4.3	0.94	637.8	26.1	649.4	21.8	690.0	32.0	637.8	26.1	92.4
617	525960	5.9	16.5189	0.7	0.8705	2.3	0.1043	2.2	0.95	639.5	13.2	635.8	10.8	622.8	15.0	639.5	13.2	102.7
1191	64032	3.1	16.4764	0.6	0.8752	2.2	0.1046	2.1	0.96	641.2	12.7	638.4	10.3	628.3	13.7	641.2	12.7	102.1
983	89939	0.9	16.4799	0.5	0.8758	1.8	0.1047	1.7	0.95	641.8	10.3	638.7	8.4	627.9	11.6	641.8	10.3	102.2
510	63769	4.3	16.2979	0.9	0.8867	2.6	0.1048	2.5	0.94	642.6	15.1	644.6	12.5	651.8	18.5	642.6	15.1	98.6
495	155512	3.7	16.2370	0.7	0.8903	2.0	0.1048	1.9	0.94	642.7	11.7	646.5	9.7	659.8	14.8	642.7	11.7	97.4
105	69889	3.2	16.3159	1.1	0.8861	3.4	0.1048	3.2	0.94	642.8	19.6	644.2	16.2	649.4	24.5	642.8	19.6	99.0
113	335826	1.7	15.8458	1.4	0.9216	3.8	0.1059	3.5	0.93	649.0	21.7	663.2	18.4	711.9	29.7	649.0	21.7	91.2
353	39196	3.1	15.5539	0.8	0.9395	2.8	0.1060	2.7	0.96	649.4	16.4	672.6	13.6	751.3	16.4	649.4	16.4	86.4
142	23556	2.9	16.4254	1.1	0.8930	2.9	0.1064	2.7	0.93	651.7	16.9	648.0	14.0	635.1	23.2	651.7	16.9	102.6
227	52244	1.6	16.2539	0.8	0.9055	2.3	0.1067	2.1	0.93	653.8	13.2	654.7	11.0	657.6	18.0	653.8	13.2	99.4
224	59200	4.2	16.1683	1.0	0.9200	2.9	0.1079	2.7	0.94	660.4	17.2	662.4	14.1	668.9	20.4	660.4	17.2	98.7
511	380240	6.2	16.1125	0.8	0.9251	1.8	0.1081	1.6	0.90	661.7	10.0	665.0	8.6	676.3	16.2	661.7	10.0	97.8
601	165003	1.6	16.1835	0.8	0.9221	2.3	0.1082	2.2	0.95	662.5	13.8	663.5	11.3	666.9	16.1	662.5	13.8	99.3
102	63075	2.5	16.3428	0.8	0.9324	3.3	0.1105	3.2	0.97	675.7	20.6	668.9	16.2	645.9	16.3	675.7	20.6	104.6
187	35242	2.8	15.8392	1.0	0.9840	3.4	0.1130	3.2	0.95	690.4	21.3	695.6	17.2	712.8	21.9	690.4	21.3	96.9
249	150963	2.3	16.1332	0.7	0.9784	2.8	0.1145	2.7	0.97	698.7	18.2	692.8	14.3	673.5	15.8	698.7	18.2	103.7
255	118827	2.4	16.0826	0.7	0.9825	2.3	0.1146	2.2	0.95	699.4	14.8	694.9	11.8	680.2	15.5	699.4	14.8	102.8
222	14887	2.3	15.4873	0.9	1.0425	3.5	0.1171	3.4	0.97	713.8	23.1	725.2	18.3	760.3	18.7	713.8	23.1	93.9
524	60610	6.7	15.0089	0.6	1.1250	1.8	0.1225	1.7	0.94	744.7	11.9	765.4	9.6	826.1	12.2	744.7	11.9	90.1
97	202773	3.1	14.6711	1.0	1.1769	3.0	0.1252	2.8	0.94	760.6	20.3	789.9	16.6	873.4	21.5	760.6	20.3	87.1
604	134937	4.7	15.2908	0.6	1.1490	1.9	0.1274	1.8	0.95	773.2	13.3	776.8	10.5	787.2	13.1	773.2	13.3	98.2
618	79458	2.3	15.4143	0.6	1.1561	2.2	0.1293	2.1	0.97	783.6	15.5	780.1	11.8	770.3	11.9	783.6	15.5	101.7
469	86149	1.9	14.7293	0.8	1.2307	1.9	0.1315	1.7	0.91	796.3	12.8	814.7	10.5	865.3	15.7	796.3	12.8	92.0
137	23968	1.8	14.4412	1.0	1.2837	3.2	0.1345	3.1	0.95	813.2	23.4	838.5	18.4	906.1	21.4	813.2	23.4	89.8
1501	2695499	2.4	14.0818	0.8	1.3221	1.8	0.1350	1.6	0.90	816.5	12.5	855.4	10.4	957.8	15.8	816.5	12.5	85.2
416	201191	4.4	14.9449	0.7	1.3016	1.8	0.1411	1.7	0.92	850.8	13.5	846.4	10.5	835.0	14.8	850.8	13.5	101.9
116	36957	2.1	14.5798	1.1	1.3737	3.1	0.1453	2.9	0.94	874.3	23.9	877.8	18.3	886.4	21.9	874.3	23.9	98.6

416	201191	4.4	14.9449	0.7	1.3016	1.8	0.1411	1.7	0.92	850.8	13.5	846.4	10.5	835.0	14.8	850.8	13.5	101.9
116	36957	2.1	14.5798	1.1	1.3737	3.1	0.1453	2.9	0.94	874.3	23.9	877.8	18.3	886.4	21.9	874.3	23.9	98.6
679	220746	1.8	14.5426	0.8	1.4121	2.4	0.1489	2.3	0.95	895.0	19.0	894.0	14.3	891.7	16.1	895.0	19.0	100.4
226	76322	3.1	13.9989	0.9	1.4936	2.7	0.1516	2.6	0.95	910.2	21.8	927.8	16.5	969.9	17.5	969.9	17.5	93.8
315	87899	2.3	13.9203	0.8	1.5602	2.9	0.1575	2.8	0.96	942.9	24.3	954.5	17.8	981.4	16.6	981.4	16.6	96.1
504	120727	3.7	13.9047	0.6	1.6484	2.1	0.1662	2.0	0.96	991.3	18.3	988.9	13.1	983.6	11.9	983.6	11.9	100.8
594	269326	4.1	13.8415	0.9	1.6164	2.3	0.1623	2.1	0.92	969.4	18.9	976.6	14.3	992.9	18.2	992.9	18.2	97.6
186	61244	3.3	13.8382	0.9	1.6397	2.6	0.1646	2.4	0.93	982.1	22.1	985.6	16.4	993.4	19.2	993.4	19.2	98.9
101	13141	2.3	13.8278	1.2	1.7029	3.0	0.1708	2.7	0.91	1016.4	25.4	1009.6	18.9	994.9	24.7	994.9	24.7	102.2
867	283695	2.3	13.8088	0.8	1.6446	2.0	0.1647	1.8	0.91	982.9	16.5	987.5	12.6	997.7	17.2	997.7	17.2	98.5
465	142109	2.0	13.8002	0.6	1.6206	2.1	0.1622	2.0	0.96	969.0	18.1	978.2	13.2	999.0	11.9	999.0	11.9	97.0
245	47618	4.4	13.7873	0.9	1.6452	2.6	0.1645	2.4	0.94	981.8	22.2	987.7	16.3	1000.9	17.9	1000.9	17.9	98.1
74	27901	1.5	13.7615	1.0	1.7535	2.8	0.1750	2.6	0.93	1039.7	25.0	1028.5	18.1	1004.6	20.9	1004.6	20.9	103.5
153	43971	2.5	13.7462	0.9	1.6763	2.6	0.1671	2.5	0.94	996.2	22.9	999.6	16.8	1006.9	18.1	1006.9	18.1	98.9
279	41250	2.3	13.6692	0.9	1.6948	2.5	0.1680	2.3	0.93	1001.2	21.7	1006.6	16.1	1018.3	18.9	1018.3	18.9	98.3
117	187618	1.7	13.6660	1.2	1.5665	4.1	0.1553	3.9	0.96	930.4	33.7	957.1	25.2	1018.8	24.3	1018.8	24.3	91.3
574	306169	3.2	13.6370	0.7	1.7713	1.7	0.1752	1.5	0.92	1040.6	14.7	1035.0	10.9	1023.1	13.5	1023.1	13.5	101.7
688	332626	6.8	13.6300	0.8	1.7321	2.1	0.1712	1.9	0.92	1018.8	18.2	1020.5	13.5	1024.1	16.5	1024.1	16.5	99.5
476	175310	2.9	13.6290	0.7	1.7364	2.1	0.1716	2.0	0.94	1021.1	18.6	1022.1	13.5	1024.3	14.7	1024.3	14.7	99.7
242	80041	3.3	13.5930	0.8	1.7579	2.6	0.1733	2.5	0.96	1030.3	23.7	1030.1	16.8	1029.6	15.4	1029.6	15.4	100.1
248	21899	4.1	13.5725	0.9	1.6515	2.5	0.1626	2.3	0.94	971.0	21.1	990.1	15.8	1032.7	17.5	1032.7	17.5	94.0
643	276602	3.4	13.5637	0.8	1.7322	2.4	0.1704	2.3	0.94	1014.3	21.6	1020.6	15.7	1034.0	16.5	1034.0	16.5	98.1
145	1267494	6.4	13.5628	0.9	1.6201	3.0	0.1594	2.9	0.95	953.2	25.5	978.0	19.0	1034.1	19.1	1034.1	19.1	92.2
691	316059	3.7	13.5432	0.5	1.7630	1.8	0.1732	1.8	0.97	1029.6	17.0	1032.0	12.0	1037.0	9.8	1037.0	9.8	99.3
269	148249	2.8	13.4753	0.7	1.7299	2.7	0.1691	2.6	0.96	1007.0	24.0	1019.7	17.2	1047.2	14.6	1047.2	14.6	96.2
223	81739	1.9	13.4616	0.8	1.7491	2.5	0.1708	2.4	0.95	1016.3	22.7	1026.8	16.4	1049.3	16.3	1049.3	16.3	96.9
434	225944	7.9	13.4571	0.7	1.8114	3.1	0.1768	3.1	0.97	1049.4	29.6	1049.6	20.5	1049.9	14.5	1049.9	14.5	100.0
210	39843	1.6	13.4293	0.8	1.8522	2.6	0.1804	2.5	0.96	1069.2	24.3	1064.2	17.0	1054.1	15.3	1054.1	15.3	101.4
1345	167013	2.9	13.4159	0.6	1.8592	2.0	0.1809	1.9	0.96	1071.9	18.6	1066.7	13.0	1056.1	11.5	1056.1	11.5	101.5
118	85162	1.9	13.3943	0.9	1.7805	3.3	0.1730	3.2	0.96	1028.4	30.2	1038.4	21.4	1059.3	17.9	1059.3	17.9	97.1
175	45783	3.1	13.3897	0.9	1.7674	2.0	0.1716	1.7	0.89	1021.1	16.5	1033.6	12.7	1060.0	18.3	1060.0	18.3	96.3
724	150494	10.9	13.3394	0.7	1.8419	2.2	0.1782	2.1	0.95	1057.1	20.1	1060.5	14.3	1067.6	13.8	1067.6	13.8	99.0
307	210721	3.1	13.3168	0.6	1.8372	2.4	0.1774	2.4	0.97	1053.0	23.0	1058.9	16.0	1071.0	12.3	1071.0	12.3	98.3
84	21124	3.2	13.2976	0.9	1.8589	3.2	0.1793	3.0	0.96	1063.1	29.6	1066.6	20.9	1073.9	18.7	1073.9	18.7	99.0
348	181988	3.8	13.2916	0.6	1.9435	2.0	0.1874	1.9	0.95	1107.0	19.6	1096.2	13.6	1074.8	12.2	1074.8	12.2	103.0
422	179780	6.4	13.2516	0.7	1.8674	2.0	0.1795	1.9	0.94	1064.1	18.4	1069.6	13.2	1080.8	13.7	1080.8	13.7	98.5
182	21526	3.0	13.2293	0.8	1.8852	2.4	0.1809	2.3	0.94	1071.8	22.4	1075.9	16.0	1084.3	16.2	1084.3	16.2	98.9
277	118458	3.5	13.2265	0.5	1.9081	2.4	0.1830	2.4	0.98	1083.6	23.5	1083.9	16.1	1084.7	10.5	1084.7	10.5	99.9
677	4914122	1.8	13.2189	0.7	1.8431	1.9	0.1767	1.8	0.94	1048.9	17.7	1061.0	12.8	1085.8	13.2	1085.8	13.2	96.6
240	38740	2.1	13.2067	0.7	1.8743	2.1	0.1795	2.0	0.95	1064.4	19.5	1072.0	13.9	1087.7	13.1	1087.7	13.1	97.9
249	74809	2.8	13.2037	0.8	1.8612	2.7	0.1782	2.5	0.96	1057.3	24.8	1067.4	17.5	1088.1	15.4	1088.1	15.4	97.2
266	101149	3.5	13.1525	0.7	1.9065	2.8	0.1819	2.7	0.97	1077.2	26.6	1083.4	18.5	1095.9	14.0	1095.9	14.0	98.3
619	204752	8.8	13.1516	0.8	1.8920	2.5	0.1805	2.3	0.95	1069.5	23.1	1078.3	16.4	1096.0	15.6	1096.0	15.6	97.6
475	332340	4.0	13.1438	0.7	1.9523	1.8	0.1861	1.6	0.92	1100.3	16.4	1099.2	11.9	1097.2	14.1	1097.2	14.1	100.3
665	1359150	4.4	13.1184	0.6	1.8957	1.8	0.1804	1.6	0.93	1069.0	16.0	1079.6	11.6	1101.1	12.9	1101.1	12.9	97.1
272	145569	2.0	13.1117	0.8	1.8338	2.0	0.1744	1.9	0.92	1036.2	17.8	1057.6	13.3	1102.1	16.0	1102.1	16.0	94.0
163	193616	3.3	13.0938	0.9	1.9286	3.1	0.1832	3.0	0.96	1084.2	29.4	1091.1	20.5	1104.8	17.2	1104.8	17.2	98.1
314	236032	3.6	13.0862	0.6	1.9313	2.2	0.1833	2.1	0.96	1085.0	20.8	1092.0	14.5	1106.0	12.7	1106.0	12.7	98.1
261	104516	3.3	13.0848	0.8	1.9937	3.1	0.1892	3.0	0.96	1117.0	30.4	1113.4	20.8	1106.2	16.1	1106.2	16.1	101.0
444	1518207	4.3	12.9462	0.9	1.8858	3.1	0.1771	2.9	0.96	1050.9	28.6	1076.1	20.5	1127.4	17.9	1127.4	17.9	93.2
247	110770	2.7	12.7808	0.6	2.1013	2.1	0.1948	2.0	0.95	1147.2	21.3	1149.2	14.6	1153.0	12.7	1153.0	12.7	99.5
452	129616	10.2	12.7439	0.7	2.1956	2.7	0.2029	2.6	0.97	1191.1	28.6	1179.7	19.0	1158.8	13.9	1158.8	13.9	102.8
768	116884	2.2	12.7201	0.6	2.1422	2.0	0.1976	1.9	0.96	1162.6	20.5	1162.5	14.0	1162.5	11.8	1162.5	11.8	100.0
430	795581	4.9	12.3702	0.5	2.3027	2.2	0.2066	2.1	0.98	1210.6	23.4	1213.1	15.3	1217.6	9.0	1217.6	9.0	99.4
358	195281	3.8	11.3976	0.6	2.5514	2.0	0.2109	1.9	0.95	1233.7	20.9	1286.9	14.3	1376.7	11.8	1376.7	11.8	89.6
293	127846	0.8	11.3213	0.7	2.9309	2.5	0.2407	2.4	0.96	1390.1	29.7	1389.9	18.7	1389.6	13.1	1389.6	13.1	100.0
103	462750	1.6	10.9922	0.8	3.1500	3.0	0.2511	2.9	0.96	1444.3	37.8	1445.0	23.4	1446.0	16.2	1446.0	16.2	99.9
153	27746	3.2	10.3732	0.8	3.6475	3.1	0.2744	3.0	0.96	1563.2	41.6	1560.0	24.8	1555.6	15.7	1555.6	15.7	100.5
258	2696905	1.3	10.1366	0.8	3.8947	2.7	0.2863	2.6	0.96	1623.2	36.6	1612.6	21.5	1598.8	14.1	1598.8	14.1	101.5
113	51372	1.6	10.0658	0.7	3.7081	3.9	0.2707	3.8	0.98	1544.4	52.3	1573.1	31.0	1611.9	13.6	1611.9	13.6	95.8
366	10673197	1.5	10.0657	0.6	3.6674	2.1	0.2677	2.0	0.97	1529.3	27.8	1564.3	16.9	1611.9	10.3	1611.9	10.3	94.9
129	32322	2.8	9.8685	0.8	3.9967	3.0	0.2861	2.9	0.97	1621.8	41.8	1633.5	24.4	1648.7	13.9	1648.7	13.9	98.4
163	41375	2.4	9.7258	0.7	4.0659	2.6	0.2868	2.5	0.96	1625.5	36.1	1647.5	21.3	1675.6	13.2	1675.6	13.2	97.0
418	143963	3.2	9.1778	0.6	4.8704	2.3	0.3242	2.2	0.97	1810.2	35.5	1797.1	19.6	1782.1	10.9	1782.1	10.9	101.6
345	389145	4.0	9.1544	0.5	4.6659	2.0	0.3098	1.9	0.96	1739.7	29.4	1761.2	16.7	1786.7	9.7	1786.7	9.7	97.4
239	154941	2.3	8.8577	0.7	5.1193	2.6	0.3289	2.5	0.96	1832.9	40.4	1839.3	22.3	1846.5	12.5	1846.5	12.5	99.3
1017	474061	2.9	7.4010	0.6	7.6060	2.2	0.4083	2.1	0.96	2207.0	38.9	2185.6	19.6	2165.5	11.2	2165.5	11.2	101.9
184	573069	2.3	6.4337	0.7	9.2891	2.9	0.4334	2.8	0.97	2321.2	54.9	2366.9	26.5	2406.6	11.3	2406.6	11.3	96.5
304	151269	1.9	5.3387	0.6	12.8172	2.4	0.4963	2.4	0.97	2597.8	50.3	2666.3	22.9	2718.7	10.1	2718.7	10.1	95.6
182	137866	2.0	5.1264	0.8	14.9224	3.0	0.5548	2.9	0.97	2845.2	67.5	2810.3	28.9	2785.4	12.4	2785.4	12.4	102.1
358	688280	4.6	5.0755	0.6	13.7112	2.7	0.5047	2.7	0.98	2634.1	58.0	2730.0	25.9	2801.7	9.2	2801.7	9.2	94.0

YAR4C

					Isotope ratios							Apparent ages (Ma)						
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
188	51641	2.6	17.5174	0.8	0.6191	1.7	0.0787	1.6	0.89	488.1	7.4	489.3	6.8	494.8	17.3	488.1	7.4	98.6
135	164825	2.6	17.0540	0.9	0.6393	2.1	0.0791	1.9	0.90	490.6	8.8	501.8	8.2	553.7	19.3	490.6	8.8	88.6
262	64612	2.7	17.4150	0.6	0.6295	1.7	0.0795	1.6	0.93	493.2	7.5	495.8	6.7	507.8	13.9	493.2	7.5	97.1
56	480003	2.5	17.3878	1.0	0.6342	3.1	0.0800	2.9	0.94	496.0	13.8	498.7	12.1	511.2	23.0	496.0	13.8	97.0
248	406611	2.3	17.3262	0.7	0.6371	1.9	0.0801	1.7	0.93	496.5	8.2	500.5	7.4	519.0	15.4	496.5	8.2	95.7
108	327404	1.8	17.3095	0.9	0.6387	2.6	0.0802	2.5	0.93	497.2	11.7	501.5	10.4	521.1	20.7	497.2	11.7	95.4
107	81201	3.2	17.3951	0.8	0.6389	2.3	0.0806	2.1	0.93	499.8	10.1	501.7	8.9	510.3	18.0	499.8	10.1	97.9
134	44611	2.8	17.4236	0.9	0.6403	2.1	0.0809	1.9	0.91	501.6	9.1	502.5	8.3	506.7	19.5	501.6	9.1	99.0
245	165397	4.4	17.5064	0.7	0.6383	2.1	0.0810	2.0	0.95	502.3	9.7	501.2	8.4	496.2	15.2	502.3	9.7	101.2
197	76279	3.2	17.5182	0.9	0.6448	2.0	0.0819	1.8	0.90	507.6	8.8	505.3	7.9	494.7	19.0	507.6	8.8	102.6
88	125033	3.1	17.5202	1.1	0.6454	3.2	0.0820	3.0	0.94	508.1	14.8	505.6	12.8	494.5	23.7	508.1	14.8	102.7
66	9882	3.6	17.4317	1.3	0.6493	2.9	0.0821	2.6	0.89	508.6	12.6	508.0	11.6	505.6	29.5	508.6	12.6	100.6
94	19667	3.4	17.2391	0.9	0.6581	2.3	0.0823	2.1	0.92	509.7	10.1	513.4	9.1	530.1	19.6	509.7	10.1	96.2
154	152092	3.4	17.0973	1.0	0.6649	1.6	0.0824	1.3	0.81	510.7	6.5	517.6	6.7	548.1	20.9	510.7	6.5	93.2
204	626906	2.7	17.4211	0.6	0.6587	1.8	0.0832	1.7	0.95	515.4	8.5	513.8	7.3	507.0	12.7	515.4	8.5	101.7
116	134356	3.5	17.2580	1.0	0.6661	2.3	0.0834	2.0	0.89	516.3	10.1	518.4	9.3	527.7	23.0	516.3	10.1	97.8
90	1638741	3.4	16.9695	1.0	0.6787	2.5	0.0835	2.3	0.92	517.2	11.3	526.0	10.1	564.5	20.8	517.2	11.3	91.6
68	38930	3.0	17.3121	0.9	0.6667	2.8	0.0837	2.6	0.95	518.2	13.2	518.7	11.3	520.8	19.1	518.2	13.2	99.5
95	171280	2.4	17.1617	1.0	0.6748	2.0	0.0840	1.8	0.87	519.9	8.8	523.6	8.3	539.9	22.2	519.9	8.8	96.3
203	67997	3.6	17.0243	0.8	0.6817	2.6	0.0842	2.4	0.94	521.0	12.1	527.8	10.5	557.4	18.4	521.0	12.1	93.5
185	90372	1.5	16.8710	0.7	0.6891	2.2	0.0843	2.1	0.95	521.8	10.3	532.3	9.0	577.2	15.3	521.8	10.3	90.4
99	102775	3.0	17.4004	0.8	0.6755	2.1	0.0853	2.0	0.92	527.4	10.0	524.1	8.8	509.6	18.0	527.4	10.0	103.5
34	61599	1.6	16.8913	1.5	0.7039	3.4	0.0862	3.1	0.90	533.2	15.8	541.1	14.4	574.5	33.0	533.2	15.8	92.8
149	43639	1.2	17.1033	0.9	0.7028	2.3	0.0872	2.2	0.92	538.9	11.2	540.5	9.8	547.3	19.6	538.9	11.2	98.5
122	78464	3.7	17.3273	0.8	0.7016	2.3	0.0882	2.2	0.94	544.7	11.3	539.7	9.6	518.8	17.1	544.7	11.3	105.0
436	129399	8.8	17.0737	0.6	0.7213	1.6	0.0893	1.5	0.92	551.5	8.0	551.4	7.0	551.1	13.8	551.5	8.0	100.1
630	24246	33.5	16.2719	0.9	0.7579	1.6	0.0894	1.3	0.83	552.3	6.8	572.8	6.8	655.2	18.7	552.3	6.8	84.3
365	226380	53.2	17.0292	0.6	0.7263	1.6	0.0897	1.5	0.94	553.8	8.0	554.4	6.9	556.8	12.2	553.8	8.0	99.5
80	547222	3.3	16.6192	0.9	0.7509	2.5	0.0905	2.4	0.93	558.5	12.7	568.7	11.1	609.7	19.7	558.5	12.7	91.6
165	2132719	1.3	17.0088	0.8	0.7377	2.1	0.0910	1.9	0.92	561.5	10.2	561.1	9.0	559.4	18.2	561.5	10.2	100.4
354	1117984	4.7	16.6186	0.8	0.7607	1.9	0.0917	1.8	0.92	565.5	9.7	574.4	8.5	609.8	16.5	565.5	9.7	92.7
347	63820	8.7	16.5635	0.7	0.7648	2.2	0.0919	2.1	0.95	566.6	11.3	576.8	9.6	617.0	15.1	566.6	11.3	91.8
447	96418	11.5	16.8463	0.5	0.7543	1.9	0.0922	1.9	0.96	568.3	10.1	570.7	8.4	580.3	11.1	568.3	10.1	97.9
765	526356	10.1	16.8323	0.7	0.7557	1.6	0.0923	1.4	0.90	568.9	7.8	571.5	7.0	582.1	15.3	568.9	7.8	97.7
148	779150	3.4	16.4736	1.0	0.7737	2.4	0.0924	2.2	0.91	569.9	11.9	581.9	10.6	628.7	21.2	569.9	11.9	90.7
118	43175	12.0	16.6213	0.8	0.7773	2.5	0.0937	2.4	0.95	577.4	13.0	583.9	11.0	609.4	16.3	577.4	13.0	94.7
624	2876954	21.8	16.7615	0.6	0.7760	1.7	0.0943	1.6	0.94	581.1	8.9	583.2	7.6	591.3	12.4	581.1	8.9	98.3
670	216849	61.0	16.7649	0.5	0.7790	1.7	0.0947	1.6	0.96	583.4	8.9	584.9	7.3	590.9	9.8	583.4	8.9	98.7
170	32573	2.0	16.7520	0.7	0.7797	2.0	0.0947	1.9	0.94	583.4	10.5	585.3	9.0	592.5	15.4	583.4	10.5	98.5
63	74421	2.2	16.5952	0.9	0.7967	2.6	0.0959	2.5	0.94	590.3	13.9	595.0	11.8	612.8	19.1	590.3	13.9	96.3
313	122588	3.9	16.5710	0.6	0.7993	1.7	0.0961	1.6	0.94	591.3	9.1	596.4	7.8	616.0	13.2	591.3	9.1	96.0
216	151277	29.5	16.6188	0.8	0.8169	2.1	0.0985	1.9	0.92	605.4	11.3	606.3	9.6	609.8	17.6	605.4	11.3	99.3
134	140311	2.3	16.4491	0.8	0.8389	1.8	0.1001	1.6	0.90	614.9	9.5	618.5	8.4	632.0	17.3	614.9	9.5	97.3
246	149924	10.8	16.3413	0.9	0.8486	1.8	0.1006	1.6	0.87	617.8	9.2	623.9	8.4	646.1	19.4	617.8	9.2	95.6
130	45311	4.5	16.4617	0.7	0.8461	1.9	0.1010	1.8	0.93	620.3	10.4	622.5	8.8	630.3	15.1	620.3	10.4	98.4
101	26488	2.1	16.4184	0.7	0.8491	2.6	0.1011	2.5	0.96	620.9	14.7	624.1	12.1	636.0	15.4	620.9	14.7	97.6
90	45321	1.9	16.2048	1.0	0.8771	2.4	0.1031	2.2	0.91	632.5	13.1	639.4	11.4	664.1	21.6	632.5	13.1	95.2
50	34208	2.4	16.4208	0.8	0.8669	2.5	0.1032	2.4	0.95	633.4	14.5	633.9	11.9	635.7	16.4	633.4	14.5	99.6
315	55387	6.1	16.5282	0.6	0.8670	1.5	0.1039	1.4	0.92	637.4	8.2	633.9	6.9	621.6	12.3	637.4	8.2	102.5
278	91747	6.4	16.2734	0.8	0.8856	2.1	0.1045	1.9	0.93	640.9	11.9	644.0	10.0	655.0	17.0	640.9	11.9	97.8
137	39801	6.3	16.3895	0.8	0.8859	1.8	0.1053	1.6	0.89	645.5	9.6	644.2	8.4	639.8	17.4	645.5	9.6	100.9

101	60372	3.1	15.8725	1.0	0.9156	2.4	0.1054	2.1	0.90	646.0	13.1	660.0	11.5	708.3	21.6	646.0	13.1	91.2
187	47704	1.5	16.2546	0.8	0.8969	2.1	0.1057	2.0	0.93	647.9	12.2	650.1	10.2	657.5	16.9	647.9	12.2	98.5
157	96546	3.9	16.1163	0.7	0.9081	2.1	0.1061	2.0	0.94	650.3	12.3	656.0	10.3	675.8	15.7	650.3	12.3	96.2
173	387848	3.8	15.9536	0.7	0.9244	2.0	0.1070	1.9	0.93	655.1	11.7	664.7	9.8	697.5	15.5	655.1	11.7	93.9
38	9285	2.0	15.9040	1.3	0.9303	3.4	0.1073	3.1	0.93	657.1	19.6	667.8	16.5	704.1	26.8	657.1	19.6	93.3
54	57876	2.3	15.8597	0.8	0.9553	3.5	0.1099	3.4	0.97	672.1	21.8	680.9	17.4	710.0	17.7	672.1	21.8	94.7
462	1285481	4.7	16.1899	0.6	0.9394	1.7	0.1103	1.6	0.93	674.5	10.3	672.6	8.4	666.0	13.1	674.5	10.3	101.3
271	379276	5.9	15.8246	0.7	0.9679	2.1	0.1111	2.0	0.95	679.1	12.9	687.4	10.5	714.7	14.4	679.1	12.9	95.0
97	163378	1.9	16.1643	1.0	0.9820	3.1	0.1151	2.9	0.94	702.5	19.2	694.7	15.4	669.4	22.0	702.5	19.2	104.9
99	74255	3.2	15.1572	0.7	1.0538	2.2	0.1158	2.0	0.94	706.6	13.5	730.8	11.2	805.6	15.6	706.6	13.5	87.7
100	60058	2.5	14.6918	0.9	1.2156	2.8	0.1295	2.7	0.95	785.2	19.6	807.8	15.5	870.5	17.7	785.2	19.6	90.2
300	829548	2.2	14.3916	0.7	1.3005	1.9	0.1357	1.8	0.94	820.6	13.7	846.0	10.9	913.2	13.5	820.6	13.7	89.9
68	43250	4.0	14.3414	0.6	1.3426	2.2	0.1396	2.1	0.96	842.7	16.4	864.3	12.6	920.4	13.2	842.7	16.4	91.6
130	61067	2.7	14.1156	0.7	1.5741	2.2	0.1611	2.1	0.95	963.1	18.9	960.0	13.8	952.9	14.0	952.9	14.0	101.1
134	493351	1.8	14.0500	0.7	1.4668	2.7	0.1495	2.6	0.97	898.0	21.8	916.8	16.2	962.4	13.3	962.4	13.3	93.3
36	242135	5.3	13.8502	1.0	1.6615	4.5	0.1669	4.4	0.97	995.0	40.2	994.0	28.4	991.6	20.8	991.6	20.8	100.3
77	37466	4.8	13.6506	0.8	1.7081	2.7	0.1691	2.6	0.96	1007.2	24.4	1011.6	17.5	1021.0	15.4	1021.0	15.4	98.6
169	105597	4.7	13.6371	0.6	1.7123	2.6	0.1694	2.5	0.97	1008.6	23.4	1013.2	16.5	1023.0	12.3	1023.0	12.3	98.6
105	91487	2.7	13.6274	0.7	1.7794	2.5	0.1759	2.4	0.96	1044.3	23.1	1038.0	16.3	1024.5	14.7	1024.5	14.7	101.9
56	26084	4.1	13.5802	1.0	1.8455	3.7	0.1818	3.5	0.96	1076.6	34.8	1061.8	24.0	1031.5	20.2	1031.5	20.2	104.4
345	1600873	4.4	13.5308	0.6	1.7820	1.8	0.1749	1.7	0.94	1038.9	16.3	1038.9	11.7	1038.9	12.2	1038.9	12.2	100.0
195	82368	12.4	13.5225	0.6	1.7165	2.0	0.1683	1.9	0.95	1003.0	17.5	1014.7	12.8	1040.1	13.0	1040.1	13.0	96.4
22	78303	1.4	13.5167	1.1	1.7869	4.2	0.1752	4.0	0.97	1040.6	38.8	1040.7	27.2	1041.0	22.0	1041.0	22.0	100.0
158	123749	3.9	13.5042	0.6	1.7679	2.1	0.1731	2.0	0.96	1029.4	18.9	1033.7	13.5	1042.8	12.2	1042.8	12.2	98.7
111	71052	2.7	13.4027	0.6	1.7979	2.0	0.1748	1.9	0.96	1038.3	18.1	1044.7	12.9	1058.1	11.6	1058.1	11.6	98.1
107	24747	2.4	13.4008	0.6	1.7387	1.8	0.1690	1.7	0.94	1006.6	16.1	1023.0	11.8	1058.4	12.2	1058.4	12.2	95.1
119	184851	9.0	13.3543	0.8	1.7283	3.3	0.1674	3.2	0.97	997.7	29.5	1019.1	21.1	1065.4	15.8	1065.4	15.8	93.7
160	86952	3.2	13.3411	0.7	1.8002	2.2	0.1742	2.1	0.95	1035.1	20.0	1045.5	14.4	1067.3	14.2	1067.3	14.2	97.0
130	184516	5.3	13.2847	0.8	1.7958	2.3	0.1730	2.1	0.93	1028.8	20.2	1043.9	14.9	1075.9	17.0	1075.9	17.0	95.6
34	175432	2.1	13.2307	0.9	1.8723	3.3	0.1797	3.2	0.96	1065.1	31.7	1071.3	22.2	1084.0	17.7	1084.0	17.7	98.3
44	77731	3.2	13.1288	0.9	1.8429	3.4	0.1755	3.3	0.96	1042.3	31.9	1060.9	22.7	1099.5	19.0	1099.5	19.0	94.8
61	15569	6.8	13.0418	0.8	1.9637	2.4	0.1857	2.2	0.93	1098.3	22.3	1103.2	15.9	1112.8	16.8	1112.8	16.8	98.7
148	1483497	2.0	12.8186	1.0	1.8816	2.7	0.1749	2.5	0.93	1039.2	24.5	1074.6	18.2	1147.2	20.4	1147.2	20.4	90.6
239	76750	3.7	12.8168	0.7	2.0331	1.8	0.1890	1.7	0.93	1115.9	17.2	1126.6	12.3	1147.4	13.0	1147.4	13.0	97.2
219	47222	9.5	12.7613	0.5	2.0535	1.6	0.1901	1.5	0.96	1121.7	15.8	1133.4	11.0	1156.0	9.3	1156.0	9.3	97.0
103	48650	2.1	12.2419	0.7	2.3625	2.3	0.2098	2.2	0.96	1227.6	25.1	1231.4	16.7	1238.0	13.5	1238.0	13.5	99.2
68	77659	1.5	11.6955	0.8	2.6246	2.5	0.2226	2.4	0.95	1295.7	28.5	1307.5	18.7	1327.0	14.8	1327.0	14.8	97.6
105	65548	0.9	11.2228	0.7	2.8953	2.6	0.2357	2.5	0.96	1364.1	31.2	1380.7	19.9	1406.4	13.4	1406.4	13.4	97.0
118	47465	2.2	11.2007	0.8	2.9513	2.0	0.2397	1.8	0.92	1385.4	22.4	1395.2	14.9	1410.2	15.0	1410.2	15.0	98.2
200	75592	2.1	11.0638	0.5	2.9273	1.8	0.2349	1.7	0.96	1360.1	21.5	1389.0	13.8	1433.7	10.1	1433.7	10.1	94.9
147	426493	3.0	11.0315	0.7	3.1327	2.3	0.2506	2.2	0.95	1441.8	28.6	1440.8	17.9	1439.2	14.0	1439.2	14.0	100.2
103	70894	3.0	9.7287	0.6	4.0995	2.2	0.2893	2.2	0.96	1637.8	31.2	1654.2	18.3	1675.1	11.3	1675.1	11.3	97.8
125	232746	2.8	9.3107	0.7	4.4835	2.0	0.3028	1.8	0.93	1705.0	27.1	1727.9	16.2	1755.8	13.3	1755.8	13.3	97.1
146	123627	3.6	9.1835	0.7	4.7589	2.2	0.3170	2.1	0.95	1774.9	32.8	1777.7	18.6	1780.9	12.0	1780.9	12.0	99.7
93	73683	0.7	9.1017	0.6	4.7504	2.7	0.3136	2.6	0.98	1758.3	40.0	1776.2	22.4	1797.2	10.7	1797.2	10.7	97.8
64	66628	2.4	8.7799	0.7	5.0459	2.7	0.3213	2.6	0.97	1796.1	40.9	1827.1	22.8	1862.5	12.1	1862.5	12.1	96.4
154	151907	4.3	6.4594	0.6	8.9130	2.1	0.4176	2.0	0.95	2249.4	37.6	2329.1	19.0	2399.8	10.8	2399.8	10.8	93.7
86	422392	1.3	5.0210	0.5	14.0797	2.7	0.5127	2.7	0.98	2668.2	58.1	2755.1	25.6	2819.3	8.1	2819.3	8.1	94.6
85	102025	1.9	3.7977	0.6	24.4869	3.1	0.6744	3.0	0.98	3323.0	78.2	3288.0	29.9	3266.7	9.0	3266.7	9.0	101.7

YAR2

					Isotope ratios							Apparent ages (Ma)						
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
290	18311	1.8	17.4818	0.9	0.6105	2.8	0.0774	2.7	0.95	480.6	12.4	483.9	10.8	499.3	18.8	480.6	12.4	96.3
67	123138	1.5	17.1531	1.3	0.6280	3.4	0.0781	3.1	0.93	484.9	14.6	494.9	13.2	541.0	27.6	484.9	14.6	89.6
265	167863	2.1	17.4727	0.8	0.6166	2.8	0.0781	2.7	0.96	485.0	12.5	487.7	10.8	500.5	17.3	485.0	12.5	96.9
223	18382	1.7	17.1626	0.9	0.6283	2.9	0.0782	2.7	0.95	485.4	12.8	495.0	11.3	539.8	19.6	485.4	12.8	89.9
280	26208	2.1	17.2163	0.9	0.6276	2.5	0.0784	2.3	0.93	486.4	10.9	494.6	9.8	533.0	20.2	486.4	10.9	91.3
272	76905	1.0	17.1815	1.0	0.6291	3.1	0.0784	2.9	0.94	486.5	13.5	495.6	12.0	537.4	22.0	486.5	13.5	90.5
478	45102	2.8	17.4503	0.8	0.6211	2.5	0.0786	2.3	0.95	487.8	10.9	490.5	9.5	503.3	17.3	487.8	10.9	96.9
337	39728	2.0	17.5679	1.0	0.6187	3.0	0.0788	2.9	0.95	489.1	13.5	489.0	11.7	488.5	21.1	489.1	13.5	100.1
306	32764	2.2	17.3272	0.9	0.6288	2.3	0.0790	2.1	0.92	490.3	10.1	495.3	9.1	518.9	19.9	490.3	10.1	94.5
450	66829	2.4	17.4497	0.8	0.6244	2.7	0.0790	2.5	0.96	490.3	12.0	492.6	10.4	503.4	16.6	490.3	12.0	97.4
491	59109	2.8	17.4011	0.9	0.6277	2.5	0.0792	2.3	0.93	491.5	10.9	494.7	9.6	509.5	19.3	491.5	10.9	96.5
203	14574	4.1	17.3080	1.1	0.6317	3.0	0.0793	2.8	0.93	492.0	13.3	497.2	11.8	521.3	23.7	492.0	13.3	94.4
295	98320	2.4	17.2203	0.9	0.6351	2.5	0.0793	2.4	0.94	492.1	11.3	499.3	10.0	532.5	19.2	492.1	11.3	92.4
465	321090	1.4	17.4316	0.7	0.6285	2.0	0.0795	1.8	0.93	492.9	8.8	495.2	7.8	505.7	15.6	492.9	8.8	97.5
554	185153	1.6	17.4458	0.8	0.6289	2.4	0.0796	2.2	0.94	493.5	10.7	495.4	9.4	503.9	18.0	493.5	10.7	98.0
266	2709210	1.5	17.3825	0.8	0.6317	2.5	0.0796	2.4	0.95	494.0	11.3	497.2	9.8	511.9	16.9	494.0	11.3	96.5
290	118550	3.2	17.2666	1.0	0.6362	2.9	0.0797	2.8	0.94	494.2	13.2	500.0	11.6	526.6	22.2	494.2	13.2	93.8
119	25996	2.1	16.7072	1.1	0.6580	3.2	0.0797	3.0	0.94	494.5	14.1	513.4	12.7	598.3	23.6	494.5	14.1	82.6
147	194813	1.5	16.9568	1.0	0.6489	2.7	0.0798	2.4	0.92	494.9	11.7	507.8	10.6	566.1	22.3	494.9	11.7	87.4
176	43043	2.0	17.3803	1.0	0.6333	3.0	0.0798	2.8	0.94	495.1	13.3	498.1	11.7	512.2	22.9	495.1	13.3	96.7
151	53800	2.2	17.4595	1.0	0.6304	2.7	0.0798	2.5	0.93	495.1	12.1	496.4	10.7	502.2	21.5	495.1	12.1	98.6
216	255482	2.1	17.3148	1.0	0.6363	2.9	0.0799	2.8	0.94	495.6	13.2	500.0	11.6	520.4	21.5	495.6	13.2	95.2
719	72795	2.5	17.4157	0.9	0.6342	2.9	0.0801	2.8	0.96	496.8	13.4	498.7	11.6	507.7	19.2	496.8	13.4	97.8
450	98097	1.3	17.4141	0.9	0.6348	2.2	0.0802	1.9	0.90	497.2	9.3	499.1	8.5	507.9	20.6	497.2	9.3	97.9
708	24913	2.5	17.3642	0.9	0.6369	2.6	0.0802	2.5	0.94	497.4	11.8	500.4	10.4	514.2	20.1	497.4	11.8	96.7
406	59854	2.6	17.1561	0.6	0.6447	2.5	0.0802	2.4	0.97	497.4	11.5	505.2	9.8	540.6	13.3	497.4	11.5	92.0
552	36808	2.6	17.5200	0.8	0.6326	2.6	0.0804	2.4	0.95	498.4	11.7	497.7	10.1	494.5	16.8	498.4	11.7	100.8
434	39006	1.7	17.3829	0.7	0.6390	2.7	0.0806	2.6	0.96	499.5	12.5	501.7	10.7	511.8	16.1	499.5	12.5	97.6
901	261490	3.1	17.4067	0.9	0.6381	2.2	0.0806	2.0	0.92	499.5	9.6	501.1	8.6	508.8	19.1	499.5	9.6	98.2
81	13539	1.7	17.3824	1.4	0.6398	3.5	0.0807	3.2	0.92	500.1	15.3	502.2	13.7	511.9	30.0	500.1	15.3	97.7
790	508919	2.5	17.2340	0.7	0.6454	1.7	0.0807	1.6	0.91	500.1	7.6	505.6	6.9	530.7	15.3	500.1	7.6	94.2
731	69769	2.1	17.3354	0.8	0.6418	2.5	0.0807	2.3	0.95	500.2	11.2	503.4	9.7	517.8	17.3	500.2	11.2	96.6
813	243161	2.9	17.3113	0.8	0.6438	2.3	0.0808	2.1	0.94	501.1	10.3	504.6	9.0	520.9	16.6	501.1	10.3	96.2
712	116873	2.9	17.6102	0.7	0.6351	2.4	0.0811	2.3	0.96	502.8	11.3	499.3	9.6	483.2	15.9	502.8	11.3	104.1
371	132865	6.8	17.3298	1.0	0.6461	2.9	0.0812	2.7	0.93	503.3	12.9	506.1	11.4	518.5	22.9	503.3	12.9	97.1
279	271220	1.4	17.3914	0.8	0.6463	2.7	0.0815	2.5	0.95	505.2	12.3	506.2	10.6	510.8	18.4	505.2	12.3	98.9
69	65011	2.3	17.2887	1.3	0.6510	3.0	0.0816	2.7	0.91	505.8	13.2	509.1	12.0	523.7	27.5	505.8	13.2	96.6
308	3982720	2.9	17.3269	0.8	0.6497	2.5	0.0816	2.3	0.95	505.9	11.3	508.3	9.8	518.9	17.2	505.9	11.3	97.5
174	38524	3.0	17.4079	1.1	0.6468	3.0	0.0817	2.8	0.93	506.0	13.7	506.5	12.1	508.7	24.9	506.0	13.7	99.5
736	131855	2.8	17.5407	0.7	0.6426	2.5	0.0817	2.4	0.96	506.5	11.8	503.9	10.0	491.9	15.6	506.5	11.8	103.0
345	88472	2.8	16.9901	1.0	0.6653	2.7	0.0820	2.5	0.93	508.0	12.1	517.9	10.8	561.8	21.2	508.0	12.1	90.4
108	13410	2.7	17.5907	1.3	0.6428	3.3	0.0820	3.0	0.92	508.1	14.7	504.0	12.9	485.6	27.6	508.1	14.7	104.6
781	527012	4.6	17.5365	0.9	0.6448	2.4	0.0820	2.2	0.92	508.1	10.7	505.3	9.4	492.5	19.9	508.1	10.7	103.2
141	27026	1.6	17.0085	1.0	0.6660	3.3	0.0822	3.1	0.95	509.0	15.2	518.3	13.3	559.5	22.8	509.0	15.2	91.0
169	128152	1.0	17.1597	0.8	0.6618	2.7	0.0824	2.5	0.95	510.2	12.5	515.7	10.8	540.2	17.7	510.2	12.5	94.5
151	82470	1.7	17.2227	1.0	0.6598	2.9	0.0824	2.7	0.94	510.6	13.5	514.5	11.8	532.2	22.5	510.6	13.5	95.9
67	77756	1.3	17.3105	1.0	0.6572	4.4	0.0825	4.2	0.97	511.1	20.8	512.9	17.5	521.0	22.2	511.1	20.8	98.1
530	72191	2.1	17.4024	0.7	0.6541	2.2	0.0826	2.1	0.95	511.3	10.3	511.0	8.9	509.3	15.7	511.3	10.3	100.4
344	318527	1.0	17.2696	0.8	0.6594	2.8	0.0826	2.7	0.96	511.6	13.4	514.2	11.5	526.2	18.4	511.6	13.4	97.2
71	32931	2.0	17.0056	1.3	0.6706	4.1	0.0827	3.9	0.95	512.2	19.4	521.0	16.9	559.8	27.2	512.2	19.4	91.5
221	253039	3.3	17.0501	1.0	0.6711	2.6	0.0830	2.4	0.92	513.9	11.7	521.4	10.5	554.2	21.6	513.9	11.7	92.7
419	152188	2.5	17.2602	0.9	0.6632	2.6	0.0830	2.5	0.94	514.1	12.3	516.6	10.6	527.4	19.1	514.1	12.3	97.5
222	14956	2.0	17.3195	0.9	0.6618	2.8	0.0831	2.6	0.95	514.8	13.0	515.7	11.3	519.8	19.7	514.8	13.0	99.0
112	368378	1.6	17.0813	1.2	0.6725	3.0	0.0833	2.7	0.92	515.8	13.5	522.2	12.1	550.2	25.6	515.8	13.5	93.8
224	63140	1.8	17.1992	0.8	0.6688	2.8	0.0834	2.6	0.95	516.5	13.1	520.0	11.3	535.1	18.3	516.5	13.1	96.5
98	9045	2.3	16.9758	1.1	0.6824	3.5	0.0840	3.3	0.94	520.1	16.5	528.2	14.4	563.7	25.0	520.1	16.5	92.3
319	366359	2.4	17.0775	0.9	0.6787	2.2	0.0841	2.0	0.92	520.3	10.0	526.0	8.9	550.6	19.1	520.3	10.0	94.5
182	56829	2.5	17.1925	1.9	0.6747	3.5	0.0841	2.9	0.84	520.8	14.5	523.6	14.2	536.0	41.3	520.8	14.5	97.2
538	341752	6.0	17.1885	0.8	0.6765	2.3	0.0843	2.1	0.94	522.0	10.7	524.7	9.3	536.5	16.6	522.0	10.7	97.3
280	68832	1.2	16.9318	0.9	0.6869	2.3	0.0844	2.1	0.92	522.1	10.7	531.0	9.5	569.3	19.2	522.1	10.7	91.7
225	17234	1.5	17.4285	0.8	0.6674	2.6	0.0844	2.5	0.95	522.1	12.5	519.1	10.6	506.1	18.2	522.1	12.5	103.2
163	47133	1.1	17.0273	1.0	0.6833	2.7	0.0844	2.5	0.93	522.2	12.4	528.8	11.0	557.1	22.0	522.2	12.4	93.7
298	65034	2.6	16.9558	0.8	0.6878	3.6	0.0846	3.5	0.97	523.4	17.8	531.5	15.1	566.3	18.0	523.4	17.8	92.4
113	21094	3.5	17.2116	1.2	0.6804	3.3	0.0849	3.0	0.93	525.5	15.3	527.0	13.4	533.5	27.0	525.5	15.3	98.5
218	17896	3.4	17.0271	0.8	0.6885	3.0	0.0850	2.9	0.96	526.1	14.7	531.9	12.5	557.1	18.4	526.1	14.7	94.4

265	994245	3.2	17.1409	0.8	0.6842	3.0	0.0851	2.9	0.97	526.2	14.5	529.3	12.3	542.6	17.0	526.2	14.5	97.0
131	114796	1.1	17.1004	0.9	0.6881	2.8	0.0853	2.6	0.94	527.9	13.2	531.6	11.4	547.7	20.1	527.9	13.2	96.4
607	60629	2.2	16.9727	0.9	0.6952	2.7	0.0856	2.6	0.95	529.3	13.0	535.9	11.3	564.1	19.2	529.3	13.0	93.8
104	60656	1.7	17.0386	1.2	0.6927	3.7	0.0856	3.5	0.95	529.5	17.9	534.4	15.5	555.6	25.9	529.5	17.9	95.3
241	32952	1.9	17.3509	0.9	0.6805	2.4	0.0856	2.2	0.92	529.7	11.2	527.1	9.8	515.9	20.6	529.7	11.2	102.7
242	24627	1.9	17.0503	0.8	0.6927	2.5	0.0857	2.3	0.94	529.8	11.8	534.4	10.2	554.1	18.1	529.8	11.8	95.6
334	88865	1.9	17.0017	0.8	0.6965	2.2	0.0859	2.1	0.94	531.1	10.6	536.7	9.2	560.4	17.0	531.1	10.6	94.8
262	144041	1.3	17.0316	1.0	0.7007	2.8	0.0866	2.6	0.94	535.1	13.5	539.2	11.7	556.5	21.3	535.1	13.5	96.2
216	28525	2.3	17.0566	0.8	0.7050	2.4	0.0872	2.3	0.94	539.0	11.8	541.8	10.2	553.3	17.8	539.0	11.8	97.4
163	34211	2.5	17.2587	1.1	0.6968	3.2	0.0872	3.0	0.94	539.1	15.5	536.9	13.3	527.6	24.8	539.1	15.5	102.2
143	61822	2.6	17.0121	1.1	0.7078	3.0	0.0873	2.8	0.93	539.7	14.6	543.4	12.7	559.0	23.8	539.7	14.6	96.5
715	146761	69.9	16.9286	0.7	0.7139	2.2	0.0877	2.0	0.95	541.6	10.6	547.1	9.1	569.8	14.9	541.6	10.6	95.1
469	47524	0.8	17.1875	0.6	0.7076	3.6	0.0882	3.5	0.99	544.9	18.4	543.3	15.0	536.6	13.2	544.9	18.4	101.6
206	63210	4.7	16.9624	1.0	0.7191	2.7	0.0885	2.5	0.92	546.4	13.2	550.1	11.6	565.4	22.6	546.4	13.2	96.6
966	52254	3.0	16.9593	0.6	0.7210	1.6	0.0887	1.5	0.93	547.8	7.9	551.3	6.9	565.8	12.6	547.8	7.9	96.8
111	11016	1.8	17.2073	1.3	0.7127	2.7	0.0889	2.4	0.88	549.3	12.6	546.4	11.5	534.1	28.0	549.3	12.6	102.9
313	81359	1.9	17.0143	0.9	0.7215	2.6	0.0890	2.5	0.94	549.8	13.1	551.6	11.2	558.7	19.1	549.8	13.1	98.4
211	33459	2.4	17.0185	1.0	0.7225	2.8	0.0892	2.7	0.93	550.6	14.0	552.1	12.1	558.2	22.1	550.6	14.0	98.6
350	256232	5.7	17.0778	0.7	0.7200	2.1	0.0892	2.0	0.94	550.7	10.3	550.7	8.8	550.6	15.6	550.7	10.3	100.0
640	719576	6.8	17.0430	0.8	0.7265	2.9	0.0898	2.8	0.96	554.4	15.1	554.5	12.6	555.0	17.1	554.4	15.1	99.9
128	37720	2.1	16.6790	1.0	0.7425	2.9	0.0898	2.8	0.94	554.4	14.7	563.8	12.7	602.0	21.0	554.4	14.7	92.1
375	34512	9.6	17.0251	0.9	0.7276	2.3	0.0898	2.1	0.93	554.6	11.3	555.2	9.8	557.4	19.1	554.6	11.3	99.5
287	75531	2.2	16.7861	0.8	0.7386	2.7	0.0899	2.6	0.96	555.1	13.9	561.6	11.7	588.1	17.2	555.1	13.9	94.4
668	105968	6.3	16.9640	0.9	0.7354	2.4	0.0905	2.3	0.93	558.4	12.2	559.7	10.5	565.2	19.3	558.4	12.2	98.8
184	85017	6.1	17.1107	1.0	0.7319	3.3	0.0908	3.1	0.96	560.5	16.8	557.7	14.1	546.4	21.2	560.5	16.8	102.6
652	179266	13.8	16.8169	0.7	0.7458	1.9	0.0910	1.8	0.94	561.2	9.6	565.8	8.3	584.1	14.4	561.2	9.6	96.1
442	33292	7.1	16.9745	0.9	0.7400	2.5	0.0911	2.4	0.94	562.1	12.8	562.4	10.9	563.8	18.9	562.1	12.8	99.7
420	308973	1.4	16.8705	0.8	0.7454	2.5	0.0912	2.4	0.94	562.6	12.8	565.5	10.9	577.2	17.9	562.6	12.8	97.5
995	371245	15.5	16.9319	0.6	0.7443	2.2	0.0914	2.1	0.96	563.8	11.6	564.9	9.7	569.3	13.9	563.8	11.6	99.0
129	10600	1.1	17.1812	1.1	0.7341	2.7	0.0915	2.5	0.91	564.3	13.5	559.0	11.7	537.4	24.4	564.3	13.5	105.0
263	40444	3.2	16.8518	0.8	0.7488	2.9	0.0915	2.8	0.96	564.5	14.9	567.5	12.5	579.6	17.7	564.5	14.9	97.4
217	104803	7.2	16.8624	0.8	0.7507	2.2	0.0918	2.1	0.93	566.3	11.3	568.7	9.8	578.3	17.9	566.3	11.3	97.9
409	100314	4.1	16.6924	1.0	0.7599	2.1	0.0920	1.9	0.89	567.4	10.2	574.0	9.3	600.2	20.9	567.4	10.2	94.5
253	208162	1.2	16.6252	0.7	0.7640	2.6	0.0921	2.5	0.96	568.1	13.8	576.3	11.6	608.9	15.7	568.1	13.8	93.3
595	363005	11.5	16.8340	0.7	0.7570	2.3	0.0924	2.2	0.95	569.9	11.8	572.3	10.0	581.9	15.0	569.9	11.8	97.9
106	12604	2.1	17.1031	1.3	0.7451	3.2	0.0924	2.9	0.91	569.9	16.0	565.4	13.9	547.1	28.8	569.9	16.0	104.2
2401	16582	5.8	15.9011	0.6	0.8019	1.6	0.0925	1.5	0.92	570.2	8.1	597.9	7.2	704.5	13.2	570.2	8.1	80.9
203	83696	2.1	16.4436	1.3	0.7761	2.8	0.0926	2.5	0.90	570.6	13.9	583.2	12.6	632.7	27.0	570.6	13.9	90.2
477	56896	8.7	16.7723	0.8	0.7706	2.4	0.0937	2.2	0.94	577.6	12.4	580.1	10.5	589.9	18.0	577.6	12.4	97.9
122	42301	1.9	16.4057	1.3	0.7895	3.0	0.0939	2.7	0.91	578.8	15.0	590.9	13.4	637.6	27.1	578.8	15.0	90.8
235	206701	1.5	16.9067	0.9	0.7670	2.8	0.0940	2.6	0.95	579.4	14.6	578.0	12.2	572.6	18.6	579.4	14.6	101.2
146	15020	2.5	16.9169	1.2	0.7698	3.3	0.0944	3.1	0.93	581.8	17.2	579.6	14.6	571.2	25.5	581.8	17.2	101.8
155	331257	1.4	16.6973	1.2	0.7839	3.3	0.0949	3.1	0.93	584.6	17.3	587.7	14.8	599.6	26.1	584.6	17.3	97.5
343	2747111	2.3	16.6215	0.7	0.7915	2.7	0.0954	2.6	0.96	587.5	14.4	592.0	11.9	609.4	15.7	587.5	14.4	96.4
73	13175	1.9	16.6516	1.1	0.7900	3.0	0.0954	2.8	0.93	587.5	15.8	591.2	13.5	605.5	23.6	587.5	15.8	97.0
758	162130	4.2	16.7904	0.7	0.7890	2.0	0.0961	1.9	0.95	591.4	10.8	590.6	9.1	587.5	14.3	591.4	10.8	100.7
320	171666	1.9	16.1419	1.0	0.8292	2.4	0.0971	2.2	0.91	597.2	12.5	613.2	11.0	672.4	21.0	597.2	12.5	88.8
676	721242	9.7	16.5403	0.7	0.8141	1.9	0.0977	1.8	0.92	600.7	10.3	604.7	8.9	620.0	16.0	600.7	10.3	96.9
83	22734	2.5	16.6745	1.4	0.8092	3.4	0.0979	3.1	0.92	601.8	18.1	602.0	15.6	602.5	29.3	601.8	18.1	99.9
167	16861	1.2	16.3468	1.2	0.8317	2.9	0.0986	2.6	0.91	606.2	15.2	614.5	13.3	645.4	25.7	606.2	15.2	93.9
349	49206	5.5	16.0726	0.7	0.8478	2.1	0.0988	1.9	0.94	607.5	11.2	623.4	9.6	681.6	15.2	607.5	11.2	89.1
819	99208	2.9	16.6651	0.7	0.8212	2.2	0.0993	2.0	0.94	610.0	11.8	608.7	9.9	603.8	15.7	610.0	11.8	101.0
237	54368	2.5	16.1707	0.8	0.8477	3.3	0.0994	3.2	0.97	611.0	18.5	623.4	15.2	668.6	16.1	611.0	18.5	91.4
84	40733	2.0	16.2651	1.4	0.8492	2.8	0.1002	2.4	0.86	615.4	14.3	624.2	13.2	656.1	30.9	615.4	14.3	93.8
335	53054	1.2	16.2711	0.9	0.8523	2.6	0.1006	2.5	0.94	617.8	14.5	625.9	12.2	655.3	18.4	617.8	14.5	94.3
2454	93625	34.1	16.5997	0.7	0.8379	1.6	0.1009	1.4	0.90	619.6	8.6	618.0	7.5	612.3	15.1	619.6	8.6	101.2
258	102680	2.7	16.3276	1.0	0.8558	2.8	0.1013	2.6	0.93	622.3	15.2	627.8	12.9	647.9	21.4	622.3	15.2	96.0
942	1407565	12.8	16.5389	0.8	0.8463	2.1	0.1015	2.0	0.93	623.3	11.8	622.6	9.9	620.2	16.3	623.3	11.8	100.5
630	124567	2.9	16.6232	0.6	0.8463	2.1	0.1020	2.0	0.96	626.3	11.8	622.6	9.6	609.2	12.6	626.3	11.8	102.8
357	257689	4.2	16.3988	0.9	0.8583	2.7	0.1021	2.5	0.94	626.6	15.0	629.2	12.5	638.5	18.9	626.6	15.0	98.1
177	402931	2.6	15.9163	1.7	0.8866	3.2	0.1023	2.7	0.85	628.2	16.3	644.6	15.2	702.5	35.3	628.2	16.3	89.4
138	40901	1.3	16.1360	1.0	0.8772	2.7	0.1027	2.5	0.93	630.0	15.1	639.5	12.9	673.2	21.4	630.0	15.1	93.6
347	34646	3.1	16.3297	1.0	0.8753	2.5	0.1037	2.4	0.92	635.8	14.3	638.4	12.1	647.6	20.9	635.8	14.3	98.2
314	297946	1.6	16.2632	0.8	0.8790	2.2	0.1037	2.1	0.93	636.0	12.4	640.5	10.5	656.4	17.1	636.0	12.4	96.9
126	95086	1.3	16.2252	1.1	0.8838	3.9	0.1040	3.7	0.96	637.8	22.5	643.0	18.5	661.4	24.4	637.8	22.5	96.4
1785	371774	10.7	16.5385	0.8	0.8677	1.9	0.1041	1.7	0.91	638.3	10.3	634.3	8.8	620.2	17.0	638.3	10.3	102.9
723	719173	48.9	16.4817	0.6	0.8707	2.1	0.1041	2.0	0.95	638.3	12.3	635.9	10.0	627.6	13.8	638.3	12.3	101.7
1762	58586	24.8	16.1960	0.7	0.8935	1.8	0.1049	1.7	0.93	643.3	10.5	648.2	8.8	665.3	14.4	643.3	10.5	96.7
312	34318	3.1	15.8396	0.9	0.9144	2.4	0.1050	2.2	0.92	643.9	13.3	659.4	11.4	712.7	19.8	643.9	13.3	90.3
419	129866	3.0	16.2083	0.7	0.8949	2.5	0.1052	2.4	0.96	644.8	14.9	649.0	12.1	663.6	15.2	644.8	14.9	97.2
91	156081	0.6	16.1103	1.1	0.9054	2.6	0.1058	2.4	0.91	648.2	14.7	654.6	12.7	676.6	23.9	648.2	14.7	95.8

112	79448	2.8	16.4756	1.3	0.8855	3.2	0.1058	2.9	0.91	648.4	18.2	643.9	15.4	628.5	28.1	648.4	18.2	103.2
408	31952	3.9	16.3415	0.8	0.9004	2.5	0.1067	2.4	0.95	653.6	14.9	651.9	12.1	646.1	17.0	653.6	14.9	101.2
268	45666	3.1	16.1426	0.9	0.9120	2.8	0.1068	2.6	0.95	654.0	16.4	658.1	13.4	672.3	18.7	654.0	16.4	97.3
1551	26140	20.8	15.6730	0.7	0.9395	2.2	0.1068	2.1	0.95	654.1	13.1	672.6	10.9	735.2	15.0	654.1	13.1	89.0
328	68346	3.1	15.3212	0.8	0.9708	2.5	0.1079	2.4	0.95	660.4	14.9	688.9	12.6	783.0	17.2	660.4	14.9	84.3
341	160745	1.8	15.9903	0.6	0.9302	2.3	0.1079	2.2	0.96	660.4	13.7	667.8	11.1	692.5	13.3	660.4	13.7	95.4
299	28706	3.0	15.2661	1.0	0.9747	2.5	0.1079	2.3	0.92	660.6	14.3	690.9	12.5	790.6	21.0	660.6	14.3	83.6
485	224123	1.2	15.8819	0.9	0.9387	2.7	0.1081	2.6	0.94	661.9	16.1	672.2	13.4	707.0	19.1	661.9	16.1	93.6
218	87882	2.1	16.0348	1.2	0.9362	3.1	0.1089	2.9	0.92	666.2	18.2	670.9	15.3	686.6	26.0	666.2	18.2	97.0
921	156079	93.7	16.0788	0.7	0.9380	2.2	0.1094	2.1	0.95	669.2	13.4	671.8	10.9	680.8	14.7	669.2	13.4	98.3
96	101506	1.5	15.8023	1.0	0.9547	3.5	0.1094	3.3	0.96	669.4	21.3	680.6	17.4	717.7	21.7	669.4	21.3	93.3
87	54459	1.5	15.8485	0.9	0.9523	3.5	0.1095	3.4	0.97	669.6	21.4	679.3	17.2	711.5	18.3	669.6	21.4	94.1
89	19445	2.6	15.7767	1.4	0.9597	4.0	0.1098	3.8	0.94	671.6	24.1	683.1	20.1	721.1	30.4	671.6	24.1	93.1
1098	1127807	3.7	16.2737	0.7	0.9384	2.0	0.1108	1.9	0.94	677.2	12.3	672.1	10.0	655.0	15.2	677.2	12.3	103.4
990	157308	19.4	16.0467	0.8	0.9573	2.3	0.1114	2.2	0.95	680.9	14.3	681.9	11.6	685.1	16.0	680.9	14.3	99.4
113	303530	3.1	15.0483	1.0	1.0236	3.0	0.1117	2.9	0.95	682.7	18.7	715.7	15.6	820.7	20.2	682.7	18.7	83.2
516	132897	6.5	15.9556	0.8	0.9666	2.5	0.1119	2.4	0.95	683.5	15.3	686.7	12.4	697.2	16.2	683.5	15.3	98.0
1832	315132	2.0	16.0213	0.7	0.9801	2.4	0.1139	2.3	0.96	695.3	15.4	693.7	12.3	688.4	15.2	695.3	15.4	101.0
608	91685	10.0	15.0211	0.7	1.0547	2.0	0.1149	1.9	0.93	701.1	12.7	731.2	10.7	824.5	15.6	701.1	12.7	85.0
340	54633	6.6	15.6237	0.7	1.0314	2.3	0.1169	2.2	0.95	712.5	14.6	719.6	11.7	741.8	14.4	712.5	14.6	96.1
122	15855	2.1	15.3349	1.4	1.0665	3.9	0.1186	3.7	0.94	722.6	25.1	737.0	20.5	781.1	28.9	722.6	25.1	92.5
611	210344	1.6	15.7121	0.7	1.0411	2.1	0.1186	2.0	0.94	722.7	13.5	724.5	10.8	729.9	14.8	722.7	13.5	99.0
185	525399	3.3	15.6013	1.1	1.0496	3.3	0.1188	3.1	0.94	723.5	21.0	728.7	16.9	744.8	22.8	723.5	21.0	97.1
52	11336	1.6	15.8511	1.3	1.0375	4.0	0.1193	3.8	0.95	726.4	25.9	722.7	20.6	711.2	27.7	726.4	25.9	102.1
402	84717	17.3	15.3334	1.3	1.1207	4.6	0.1246	4.4	0.96	757.2	31.6	763.3	24.8	781.3	27.0	757.2	31.6	96.9
257	50370	4.4	14.8960	0.8	1.1557	3.0	0.1249	2.9	0.96	758.5	20.6	779.9	16.3	841.9	17.1	758.5	20.6	90.1
290	392202	10.8	15.0907	1.1	1.1457	3.1	0.1254	2.9	0.94	761.5	20.7	775.2	16.7	814.8	22.3	761.5	20.7	93.5
338	251163	3.7	15.3132	0.9	1.1536	2.6	0.1281	2.4	0.93	777.1	17.6	778.9	14.0	784.1	19.2	777.1	17.6	99.1
629	947084	10.2	14.8155	0.6	1.2142	2.2	0.1305	2.1	0.96	790.5	15.3	807.1	12.0	853.2	13.0	790.5	15.3	92.7
180	37486	2.7	14.6988	1.0	1.2293	3.4	0.1310	3.2	0.95	793.8	24.0	814.0	18.9	869.5	21.5	793.8	24.0	91.3
761	244646	12.0	15.3319	0.7	1.1989	2.1	0.1333	2.0	0.94	806.8	15.2	800.1	11.8	781.5	15.8	806.8	15.2	103.2
235	77988	2.6	14.7995	0.7	1.2736	2.0	0.1367	1.9	0.94	826.0	14.9	834.0	11.7	855.4	14.4	826.0	14.9	96.6
185	50028	2.3	14.4769	0.9	1.3087	2.8	0.1374	2.7	0.95	830.0	20.9	849.6	16.2	901.0	18.0	830.0	20.9	92.1
419	64690	5.9	14.9241	0.9	1.2846	2.6	0.1390	2.4	0.93	839.2	18.8	838.9	14.6	838.0	19.0	839.2	18.8	100.2
46	11759	2.9	14.4765	1.1	1.3479	3.9	0.1415	3.8	0.96	853.2	30.0	866.6	22.8	901.0	23.1	853.2	30.0	94.7
529	136783	2.0	14.7530	0.8	1.3295	1.6	0.1423	1.4	0.87	857.4	11.4	858.6	9.4	861.9	16.7	857.4	11.4	99.5
539	411556	6.3	14.4638	0.7	1.3750	2.0	0.1442	1.9	0.93	868.6	15.4	878.3	11.9	902.8	14.9	868.6	15.4	96.2
131	47685	1.1	14.2968	1.0	1.4085	2.3	0.1461	2.1	0.90	878.8	17.1	892.5	13.8	926.8	20.8	926.8	20.8	94.8
72	14378	3.6	14.2088	1.0	1.4462	3.1	0.1490	2.9	0.94	895.5	24.2	908.3	18.4	939.4	21.3	939.4	21.3	95.3
940	74470	2.7	14.1747	0.8	1.4761	2.5	0.1517	2.3	0.95	910.7	19.9	920.6	15.0	944.4	15.7	944.4	15.7	96.4
461	101352	2.8	14.1671	0.9	1.4734	2.5	0.1514	2.4	0.94	908.8	20.2	919.5	15.4	945.5	18.1	945.5	18.1	96.1
474	102755	2.8	14.1645	0.7	1.4661	2.3	0.1506	2.1	0.95	904.4	18.0	916.5	13.6	945.8	14.6	945.8	14.6	95.6
884	260182	24.5	14.1496	0.8	1.5328	2.1	0.1573	2.0	0.93	941.7	17.3	943.6	13.1	948.0	16.0	948.0	16.0	99.3
451	1413698	3.5	14.0811	0.7	1.5282	2.4	0.1561	2.4	0.96	934.9	20.5	941.8	15.0	957.9	13.5	957.9	13.5	97.6
130	38839	2.8	14.0801	1.1	1.5066	4.3	0.1538	4.2	0.97	922.5	36.1	933.0	26.5	958.0	22.4	958.0	22.4	96.3
194	34898	2.6	14.0508	0.7	1.4444	2.9	0.1472	2.8	0.97	885.2	22.9	907.5	17.1	962.3	14.6	962.3	14.6	92.0
39	7683	1.6	14.0132	1.4	1.6577	4.3	0.1685	4.1	0.95	1003.7	38.0	992.5	27.3	967.8	27.6	967.8	27.6	103.7
89	22102	5.0	14.0008	1.2	1.4162	3.0	0.1438	2.8	0.92	866.2	22.6	895.8	18.1	969.6	24.6	969.6	24.6	89.3
496	938966	1.9	13.9740	0.8	1.4525	2.5	0.1472	2.3	0.95	885.3	19.3	910.9	14.8	973.5	15.8	973.5	15.8	90.9
638	531942	3.1	13.9681	0.8	1.5569	2.0	0.1577	1.9	0.92	944.1	16.5	953.2	12.7	974.4	16.7	974.4	16.7	96.9
296	272438	3.1	13.9613	0.9	1.5927	2.7	0.1613	2.6	0.95	963.8	23.2	967.3	17.1	975.3	17.6	975.3	17.6	98.8
390	1367479	3.7	13.9409	0.8	1.5601	2.6	0.1577	2.5	0.96	944.2	21.6	954.5	15.9	978.3	15.4	978.3	15.4	96.5
786	221321	15.4	13.9277	0.7	1.4923	2.6	0.1507	2.5	0.96	905.1	21.3	927.3	15.9	980.2	14.1	980.2	14.1	92.3
180	67209	2.4	13.8812	0.8	1.5251	2.2	0.1535	2.0	0.93	920.8	17.4	940.5	13.4	987.1	16.7	987.1	16.7	93.3
426	229222	2.9	13.8717	0.9	1.5878	3.6	0.1597	3.4	0.97	955.4	30.6	965.5	22.2	988.5	18.6	988.5	18.6	96.7
752	1173319	4.9	13.8554	0.7	1.5960	2.3	0.1604	2.2	0.96	958.9	19.6	968.6	14.3	990.9	13.2	990.9	13.2	96.8
403	324606	3.0	13.8305	0.6	1.6103	2.5	0.1615	2.4	0.97	965.3	21.7	974.2	15.7	994.5	12.8	994.5	12.8	97.1
213	54894	2.7	13.8271	1.1	1.6622	3.6	0.1667	3.4	0.95	993.9	31.6	994.2	22.9	995.0	22.7	995.0	22.7	99.9
292	265358	2.9	13.8082	1.0	1.6791	2.8	0.1682	2.6	0.93	1001.9	24.2	1000.6	17.8	997.8	20.2	997.8	20.2	100.4
123	1128367	2.5	13.7965	0.7	1.6792	2.8	0.1680	2.7	0.97	1001.2	25.4	1000.7	18.1	999.5	14.9	999.5	14.9	100.2
420	2276726	1.7	13.7699	0.7	1.6976	2.3	0.1695	2.2	0.95	1009.6	20.9	1007.6	14.9	1003.4	14.2	1003.4	14.2	100.6
301	1571085	2.7	13.7513	0.7	1.5930	2.3	0.1589	2.2	0.96	950.5	19.2	967.5	14.2	1006.2	13.6	1006.2	13.6	94.5
350	153847	2.3	13.7286	0.7	1.6863	2.2	0.1679	2.1	0.94	1000.5	19.4	1003.4	14.1	1009.5	14.8	1009.5	14.8	99.1
1223	267412	12.0	13.6927	0.8	1.6728	2.4	0.1661	2.3	0.94	990.7	21.0	998.2	15.5	1014.8	16.9	1014.8	16.9	97.6
398	124511	2.0	13.6821	0.7	1.6841	2.0	0.1671	1.9	0.94	996.2	17.7	1002.5	13.0	1016.4	14.4	1016.4	14.4	98.0
471	300506	4.0	13.6791	0.7	1.6674	2.4	0.1654	2.3	0.95	986.8	20.8	996.2	15.2	1016.8	14.9	1016.8	14.9	97.1
189	221834	1.8	13.6755	0.8	1.5301	5.4	0.1518	5.3	0.99	910.9	45.4	942.6	33.1	1017.4	15.2	1017.4	15.2	89.5
365	51699	4.3	13.6686	0.8	1.6461	2.6	0.1632	2.5	0.95	974.4	22.6	988.0	16.6	1018.4	16.5	1018.4	16.5	95.7
280	479011	3.1	13.6358	0.9	1.6767	3.1	0.1658	3.0	0.96	989.1	27.4	999.7	19.9	1023.2	18.6	1023.2	18.6	96.7
445	92291	5.2	13.6320	0.8	1.6354	2.4	0.1617	2.2	0.94	966.1	20.2	983.9	15.0	1023.8	15.9	1023.8	15.9	94.4
200	118340	1.0	13.6312	0.8	1.6987	2.1	0.1679	1.9	0.92	1000.7	17.8	1008.0	13.4	1023.9	16.7	1023.9	16.7	97.7

200	118340	1.0	13.6312	0.8	1.6987	2.1	0.1679	1.9	0.92	1000.7	17.8	1008.0	13.4	1023.9	16.7	1023.9	16.7	97.7
455	125414	5.2	13.6155	0.7	1.7173	2.1	0.1696	2.0	0.95	1009.8	18.3	1015.0	13.3	1026.2	13.4	1026.2	13.4	98.4
321	415704	5.4	13.5848	0.7	1.6912	2.6	0.1666	2.5	0.96	993.5	23.3	1005.2	16.8	1030.8	14.1	1030.8	14.1	96.4
212	37001	1.8	13.5338	0.7	1.7585	2.9	0.1726	2.8	0.97	1026.5	26.5	1030.3	18.7	1038.4	15.1	1038.4	15.1	98.8
552	189118	2.6	13.5248	0.7	1.7408	1.9	0.1708	1.8	0.94	1016.3	17.1	1023.8	12.5	1039.8	13.5	1039.8	13.5	97.7
222	50863	2.5	13.5241	0.8	1.7631	2.8	0.1729	2.7	0.96	1028.3	25.9	1032.0	18.5	1039.9	16.8	1039.9	16.8	98.9
216	104166	1.4	13.5240	0.8	1.8111	3.4	0.1776	3.3	0.97	1054.1	31.9	1049.5	22.2	1039.9	16.8	1039.9	16.8	101.4
181	112885	3.8	13.5190	0.7	1.7899	1.9	0.1755	1.8	0.93	1042.3	17.5	1041.8	12.7	1040.6	14.4	1040.6	14.4	100.2
143	19793	2.6	13.5068	0.9	1.7475	2.8	0.1712	2.6	0.95	1018.7	24.9	1026.2	18.1	1042.5	18.4	1042.5	18.4	97.7
164	75810	2.2	13.4928	0.9	1.8210	3.2	0.1782	3.1	0.96	1057.1	29.8	1053.0	21.0	1044.5	19.1	1044.5	19.1	101.2
136	31844	3.0	13.4926	0.8	1.7694	3.7	0.1732	3.7	0.98	1029.5	34.9	1034.3	24.3	1044.6	15.6	1044.6	15.6	98.6
252	60216	2.2	13.4546	0.7	1.7956	2.7	0.1752	2.6	0.96	1040.8	25.3	1043.9	17.9	1050.3	14.8	1050.3	14.8	99.1
253	19979578	2.6	13.4514	0.8	1.7379	2.9	0.1696	2.8	0.96	1009.6	26.2	1022.7	18.8	1050.8	15.8	1050.8	15.8	96.1
192	60137	1.5	13.4246	0.7	1.7919	2.7	0.1745	2.7	0.97	1036.7	25.4	1042.5	17.9	1054.8	14.4	1054.8	14.4	98.3
133	24102	1.7	13.4199	1.0	1.6837	3.5	0.1639	3.4	0.96	978.3	30.8	1002.4	22.6	1055.5	20.8	1055.5	20.8	92.7
82	144808	1.7	13.4038	1.0	1.7113	3.1	0.1664	3.0	0.95	992.0	27.4	1012.8	20.1	1057.9	19.8	1057.9	19.8	93.8
779	200520	3.2	13.3831	0.5	1.7956	2.2	0.1743	2.2	0.97	1035.7	20.7	1043.9	14.6	1061.0	10.9	1061.0	10.9	97.6
133	127913	2.4	13.3783	0.6	1.8521	2.5	0.1797	2.4	0.97	1065.4	23.6	1064.2	16.4	1061.7	12.4	1061.7	12.4	100.3
676	773244	2.2	13.3674	0.7	1.7875	2.0	0.1733	1.9	0.93	1030.2	18.1	1040.9	13.3	1063.4	14.6	1063.4	14.6	96.9
66	25308	1.1	13.3666	0.9	1.9029	3.5	0.1845	3.3	0.96	1091.3	33.4	1082.1	23.0	1063.5	18.3	1063.5	18.3	102.6
129	37463	2.0	13.3600	1.0	1.8241	3.4	0.1767	3.3	0.95	1049.2	31.6	1054.2	22.5	1064.5	20.8	1064.5	20.8	98.6
728	156843	4.4	13.3119	1.0	1.8496	2.6	0.1786	2.4	0.93	1059.2	23.6	1063.3	17.2	1071.8	19.7	1071.8	19.7	98.8
173	53333	2.2	13.3092	0.8	1.7716	3.0	0.1710	2.9	0.97	1017.7	27.3	1035.1	19.5	1072.2	15.7	1072.2	15.7	94.9
211	133571	2.0	13.2976	0.8	1.8366	2.7	0.1771	2.5	0.96	1051.3	24.7	1058.6	17.5	1073.9	15.7	1073.9	15.7	97.9
347	120253	3.1	13.2958	0.9	1.8417	2.9	0.1776	2.8	0.95	1053.8	27.4	1060.5	19.4	1074.2	17.6	1074.2	17.6	98.1
160	135131	2.3	13.2945	0.8	1.8828	2.7	0.1815	2.6	0.96	1075.4	25.4	1075.0	17.8	1074.4	15.9	1074.4	15.9	100.1
357	102700	8.6	13.2918	0.7	1.7747	2.5	0.1711	2.4	0.95	1018.1	22.4	1036.2	16.2	1074.8	15.0	1074.8	15.0	94.7
243	192729	4.1	13.2576	0.8	1.8982	2.8	0.1825	2.6	0.95	1080.7	26.2	1080.5	18.4	1079.9	16.9	1079.9	16.9	100.1
163	121086	1.9	13.2359	0.7	1.8730	2.4	0.1798	2.2	0.95	1065.9	22.1	1071.6	15.6	1083.2	14.4	1083.2	14.4	98.4
323	115367	3.6	13.2355	0.9	1.8588	2.5	0.1784	2.3	0.93	1058.4	22.7	1066.5	16.5	1083.3	18.1	1083.3	18.1	97.7
384	58865	7.8	13.2141	0.7	1.8963	2.4	0.1817	2.3	0.96	1076.5	23.0	1079.8	16.1	1086.5	13.9	1086.5	13.9	99.1
111	55161	5.3	13.1986	0.9	1.8860	2.6	0.1805	2.5	0.94	1069.9	24.5	1076.2	17.5	1088.9	17.2	1088.9	17.2	98.3
299	525188	2.8	13.1969	0.6	1.9008	2.5	0.1819	2.4	0.97	1077.5	23.7	1081.4	16.4	1089.2	12.0	1089.2	12.0	98.9
276	97323	3.0	13.1544	0.8	1.9137	2.5	0.1826	2.4	0.95	1081.1	23.5	1085.9	16.5	1095.6	15.1	1095.6	15.1	98.7
187	99109	2.1	13.1385	0.7	1.9421	2.6	0.1851	2.5	0.97	1094.5	25.4	1095.7	17.5	1098.0	13.5	1098.0	13.5	99.7
500	219800	2.6	13.1276	0.8	1.8601	2.1	0.1771	2.0	0.92	1051.1	19.2	1067.0	14.1	1099.7	16.4	1099.7	16.4	95.6
134	35641	5.7	13.1190	0.9	1.9356	4.0	0.1842	3.9	0.98	1089.7	38.8	1093.5	26.5	1101.0	17.1	1101.0	17.1	99.0
21	45225	2.2	13.0822	1.4	1.8933	5.5	0.1796	5.3	0.97	1065.0	52.4	1078.7	36.7	1106.6	27.8	1106.6	27.8	96.2
408	2361772	2.9	13.0318	0.8	1.9378	2.5	0.1832	2.4	0.95	1084.2	23.6	1094.2	16.7	1114.3	16.0	1114.3	16.0	97.3
374	47433	1.8	12.9880	0.7	1.9437	2.4	0.1831	2.3	0.95	1083.8	22.6	1096.3	15.9	1121.1	14.6	1121.1	14.6	96.7
75	92333	1.6	12.9170	1.0	2.0389	3.6	0.1910	3.4	0.96	1126.8	35.2	1128.6	24.3	1132.0	20.7	1132.0	20.7	99.5
496	96852	18.5	12.8854	0.7	2.0406	2.9	0.1907	2.8	0.97	1125.2	29.4	1129.2	20.0	1136.8	14.6	1136.8	14.6	99.0
108	138201	0.8	12.8249	0.9	1.9985	2.6	0.1859	2.4	0.94	1099.1	24.5	1115.0	17.5	1146.2	17.6	1146.2	17.6	95.9
650	47430	2.7	12.8093	0.8	2.0444	2.4	0.1899	2.3	0.95	1121.0	23.8	1130.4	16.7	1148.6	15.6	1148.6	15.6	97.6
87	40423	3.7	12.7729	1.0	2.0347	3.4	0.1885	3.2	0.95	1113.2	32.6	1127.2	22.8	1154.2	20.7	1154.2	20.7	96.4
463	77853	3.3	12.7090	0.7	2.0363	2.2	0.1877	2.0	0.94	1108.9	20.7	1127.7	14.6	1164.2	14.1	1164.2	14.1	95.2
316	796001	1.6	12.6444	0.7	2.1657	2.6	0.1986	2.5	0.96	1167.8	26.5	1170.1	17.9	1174.3	14.1	1174.3	14.1	99.4
184	2343092	3.9	12.5378	0.8	2.0853	3.1	0.1896	3.0	0.97	1119.3	30.7	1144.0	21.3	1191.0	16.0	1191.0	16.0	94.0
259	70287	2.6	12.4913	0.7	2.2904	2.9	0.2075	2.8	0.97	1215.5	30.9	1209.3	20.4	1198.3	14.5	1198.3	14.5	101.4
184	27753	2.8	12.4877	1.1	2.1622	2.9	0.1958	2.7	0.93	1152.9	28.4	1169.0	20.2	1198.9	21.7	1198.9	21.7	96.2
84	16655	3.9	12.3646	1.0	2.2664	2.7	0.2032	2.5	0.93	1192.7	27.1	1201.9	18.9	1218.4	19.6	1218.4	19.6	97.9
60	53810	1.1	12.3488	2.4	2.0653	4.1	0.1850	3.4	0.82	1094.1	34.1	1137.4	28.4	1221.0	47.0	1221.0	47.0	89.6
91	136510	1.3	12.3024	1.1	2.3350	3.7	0.2083	3.6	0.96	1220.0	39.8	1223.0	26.6	1228.3	21.2	1228.3	21.2	99.3
206	95783	2.6	12.1242	0.7	2.4709	2.8	0.2173	2.7	0.97	1267.5	31.0	1263.6	20.1	1256.9	14.1	1256.9	14.1	100.8
363	89894	2.6	12.1125	0.8	2.2239	2.3	0.1954	2.1	0.94	1150.4	22.5	1188.6	15.9	1258.8	14.8	1258.8	14.8	91.4
153	115526	2.3	11.8933	0.7	2.4236	3.3	0.2091	3.2	0.98	1223.8	35.5	1249.6	23.5	1294.4	14.1	1294.4	14.1	94.5
117	40593	0.5	11.3917	0.8	2.6760	3.3	0.2211	3.2	0.97	1287.6	37.7	1321.8	24.7	1377.7	15.7	1377.7	15.7	93.5
116	48068	1.9	11.3609	0.9	2.9692	3.1	0.2447	3.0	0.95	1410.9	37.7	1399.8	23.7	1382.9	17.9	1382.9	17.9	102.0
893	170999	5.4	11.3174	1.5	2.4758	2.6	0.2032	2.1	0.83	1192.6	23.3	1265.0	18.8	1390.3	28.1	1390.3	28.1	85.8
113	57557	6.9	10.4035	0.7	3.5813	3.2	0.2702	3.1	0.98	1541.9	42.9	1545.4	25.5	1550.1	13.0	1550.1	13.0	99.5
57	924166	3.1	10.3880	0.9	3.1664	3.8	0.2386	3.7	0.97	1379.2	46.2	1449.0	29.5	1552.9	16.5	1552.9	16.5	88.8
97	218405	1.9	10.1044	0.8	4.0237	2.8	0.2949	2.7	0.96	1665.8	39.9	1639.0	23.0	1604.7	14.1	1604.7	14.1	103.8
274	49337	1.6	10.0999	0.8	3.1226	2.9	0.2287	2.8	0.96	1327.9	33.4	1438.3	22.3	1605.5	15.4	1605.5	15.4	82.7
140	17946	1.3	9.8807	1.0	3.9506	2.7	0.2831	2.5	0.93	1607.0	36.0	1624.1	22.0	1646.4	18.3	1646.4	18.3	97.6
136	101769	1.7	9.7822	0.8	4.2187	2.5	0.2993	2.4	0.95	1687.9	35.1	1677.7	20.4	1664.9	14.0	1664.9	14.0	101.4
51	25874	1.2	9.7681	0.9	4.1748	4.1	0.2958	4.0	0.98	1670.3	59.5	1669.1	34.0	1667.6	17.0	1667.6	17.0	100.2
223	413084	2.2	9.7109	1.0	3.8417	2.5	0.2706	2.3	0.92	1543.7	31.6	1601.5	20.1	1678.5	18.0	1678.5	18.0	92.0
125	94236	1.8	9.6110	0.8	4.2377	3.3	0.2954	3.2	0.97	1668.4	46.3	1681.4	26.8	1697.5	15.5	1697.5	15.5	98.3
253	675763	2.2	9.5432	0.7	4.4860	2.5	0.3105	2.4	0.96	1743.1	36.4	1728.4	20.5	1710.6	12.0	1710.6	12.0	101.9
477	144821	2.1	9.4594	0.6	4.3669	2.3	0.2996	2.2	0.97	1689.3	33.1	1706.1	19.0	1726.8	10.5	1726.8	10.5	97.8
371	219500	3.6	9.3473	0.7	4.4429	2.3	0.3012	2.2	0.95	1697.2	33.0	1720.4	19.4	1748.6	13.7	1748.6	13.7	97.1

230	194733	1.1	9.2964	0.8	4.5745	3.1	0.3084	3.0	0.97	1733.0	45.7	1744.6	25.9	1758.6	14.3	1758.6	14.3	98.5
430	1764995	3.2	8.7879	0.6	4.9774	2.0	0.3172	2.0	0.96	1776.2	30.5	1815.5	17.3	1860.8	10.2	1860.8	10.2	95.5
62	49010	2.1	6.3025	1.0	9.5299	6.2	0.4356	6.1	0.99	2331.0	119.4	2390.4	56.9	2441.5	17.1	2441.5	17.1	95.5
137	869379	2.3	6.2430	0.7	10.2280	2.9	0.4631	2.9	0.97	2453.3	58.3	2455.6	27.3	2457.5	12.1	2457.5	12.1	99.8
221	96432	2.0	5.4747	0.6	11.2440	3.0	0.4465	3.0	0.98	2379.5	58.7	2543.6	28.0	2677.1	9.2	2677.1	9.2	88.9
169	115315	1.2	5.4359	0.7	12.0072	2.3	0.4734	2.2	0.95	2498.4	46.2	2605.0	22.0	2688.9	11.9	2688.9	11.9	92.9
207	134274	2.1	5.3582	0.7	12.1099	2.3	0.4706	2.2	0.96	2486.2	46.0	2613.0	21.9	2712.7	11.2	2712.7	11.2	91.7
73	7155633	1.8	5.2806	0.6	13.0366	3.1	0.4993	3.0	0.98	2610.7	64.6	2682.3	29.0	2736.7	10.6	2736.7	10.6	95.4
312	197616	17.4	5.2401	0.7	12.8153	2.7	0.4870	2.6	0.96	2557.9	55.7	2666.2	25.7	2749.4	11.8	2749.4	11.8	93.0
417	2969096	2.2	4.7765	0.8	15.3930	2.5	0.5333	2.4	0.95	2755.1	53.7	2839.9	24.1	2900.6	13.1	2900.6	13.1	95.0
1496	403806	1.5	4.6521	0.7	18.1667	2.4	0.6129	2.2	0.95	3081.8	55.1	2998.6	22.7	2943.3	11.6	2943.3	11.6	104.7
285	128763	4.6	4.3769	0.6	14.7085	2.7	0.4669	2.6	0.97	2470.0	54.0	2796.6	25.7	3041.4	9.7	3041.4	9.7	81.2
175	417583	1.2	4.2191	0.8	19.1767	2.4	0.5868	2.3	0.95	2976.4	53.8	3050.7	23.0	3100.0	12.2	3100.0	12.2	96.0

HEM

					Isotope ratios							Apparent ages (Ma)						
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
4136	10307	11.3	15.9574	0.8	0.5141	2.1	0.0595	1.9	0.93	372.6	6.9	421.2	7.1	697.0	16.0	372.6	6.9	NA
301	39844	2.1	17.5591	1.1	0.6124	3.4	0.0780	3.2	0.94	484.1	15.0	485.1	13.2	489.6	24.6	484.1	15.0	98.9
568	52146	2.4	17.2751	0.8	0.6285	2.5	0.0787	2.4	0.95	488.6	11.1	495.2	9.8	525.5	17.6	488.6	11.1	93.0
229	29609	1.6	17.0930	1.1	0.6377	2.9	0.0791	2.6	0.92	490.5	12.5	500.9	11.3	548.7	24.3	490.5	12.5	89.4
1240	105542	7.7	17.3498	0.8	0.6298	2.0	0.0792	1.9	0.92	491.6	8.8	496.0	7.9	516.0	17.1	491.6	8.8	95.3
325	37186	2.1	16.5715	1.1	0.6630	3.1	0.0797	2.9	0.94	494.2	13.7	516.4	12.5	615.9	23.2	494.2	13.7	80.2
146	16727	1.6	16.6237	1.5	0.6612	4.3	0.0797	4.0	0.94	494.4	19.2	515.3	17.4	609.1	32.5	494.4	19.2	81.2
557	35473	2.0	17.4459	0.8	0.6308	3.0	0.0798	2.9	0.96	495.0	13.7	496.6	11.7	503.9	17.8	495.0	13.7	98.2
533	31613	2.0	17.4566	0.8	0.6310	2.3	0.0799	2.2	0.94	495.5	10.5	496.7	9.2	502.5	17.3	495.5	10.5	98.6
265	68074	2.3	17.2210	1.1	0.6403	2.8	0.0800	2.5	0.92	495.9	12.1	502.5	10.9	532.4	23.0	495.9	12.1	93.2
864	68777	2.4	17.4512	1.0	0.6381	2.8	0.0808	2.6	0.93	500.7	12.5	501.1	10.9	503.2	21.6	500.7	12.5	99.5
327	20955	1.9	17.5496	1.2	0.6364	3.3	0.0810	3.1	0.94	502.1	15.1	500.1	13.2	490.8	26.0	502.1	15.1	102.3
1171	204855	6.4	17.1643	0.6	0.6521	2.1	0.0812	2.0	0.95	503.2	9.9	509.8	8.6	539.6	14.2	503.2	9.9	93.3
423	38153	1.6	17.4844	0.8	0.6409	2.7	0.0813	2.6	0.95	503.7	12.6	502.9	10.8	499.0	18.3	503.7	12.6	101.0
1159	1454901	1.2	17.4517	0.7	0.6425	2.2	0.0813	2.1	0.95	504.0	10.2	503.9	8.8	503.1	15.0	504.0	10.2	100.2
515	85871	2.7	17.3640	0.9	0.6477	3.2	0.0816	3.1	0.96	505.5	15.1	507.1	12.9	514.2	20.6	505.5	15.1	98.3
211	58774	2.0	17.2793	1.1	0.6513	2.8	0.0816	2.6	0.92	505.8	12.7	509.3	11.4	524.9	25.1	505.8	12.7	96.4
265	18056	1.7	17.1934	1.0	0.6556	2.9	0.0818	2.7	0.94	506.6	13.0	511.9	11.5	535.8	21.7	506.6	13.0	94.5
665	231472	2.9	17.0634	0.9	0.6608	2.6	0.0818	2.4	0.93	506.7	11.7	515.1	10.3	552.5	19.8	506.7	11.7	91.7
569	98931	2.4	17.3876	0.7	0.6527	2.5	0.0823	2.4	0.96	509.9	11.6	510.1	9.9	511.2	15.6	509.9	11.6	99.7
1172	136989	2.4	17.5308	0.8	0.6474	1.9	0.0823	1.7	0.91	509.9	8.4	506.9	7.6	493.2	17.5	509.9	8.4	103.4
579	25036	3.0	17.3370	0.8	0.6550	2.4	0.0824	2.3	0.95	510.2	11.4	511.6	9.8	517.6	16.7	510.2	11.4	98.6
726	416531	2.6	17.3371	0.7	0.6551	2.6	0.0824	2.5	0.96	510.3	12.1	511.6	10.3	517.6	16.2	510.3	12.1	98.6
173	61760	1.7	17.1437	1.3	0.6629	3.0	0.0824	2.7	0.90	510.6	13.1	516.4	12.0	542.2	27.9	510.6	13.1	94.2
314	309828	1.8	17.1578	1.0	0.6693	2.8	0.0833	2.6	0.93	515.7	12.8	520.3	11.3	540.4	22.8	515.7	12.8	95.4
180	25290	1.1	17.3790	1.1	0.6614	2.9	0.0834	2.7	0.93	516.2	13.5	515.4	11.8	512.3	23.4	516.2	13.5	100.7
170	26272	1.5	16.9600	1.2	0.6790	3.6	0.0835	3.4	0.94	517.1	17.0	526.1	14.9	565.7	26.1	517.1	17.0	91.4
226	17032	2.9	17.2154	1.2	0.6693	2.7	0.0836	2.5	0.91	517.3	12.3	520.3	11.1	533.1	25.2	517.3	12.3	97.0
384	89542	2.9	17.1858	0.9	0.6720	3.1	0.0838	3.0	0.95	518.5	14.8	521.9	12.7	536.8	20.5	518.5	14.8	96.6
813	999796	1.9	17.2156	0.9	0.6756	2.6	0.0844	2.5	0.94	522.1	12.4	524.1	10.8	533.1	20.0	522.1	12.4	97.9
351	56100	1.8	17.0914	1.1	0.6811	2.9	0.0844	2.7	0.92	522.5	13.3	527.5	11.9	548.9	24.5	522.5	13.3	95.2
157	24462	1.9	17.4028	1.1	0.6708	3.1	0.0847	2.9	0.93	523.9	14.4	521.2	12.6	509.3	24.5	523.9	14.4	102.9
275	63343	0.7	17.0821	1.2	0.6843	3.0	0.0848	2.8	0.92	524.6	14.0	529.4	12.4	550.1	25.2	524.6	14.0	95.4
508	188592	37.6	17.1214	0.8	0.6845	2.5	0.0850	2.4	0.94	525.9	11.9	529.5	10.3	545.0	18.1	525.9	11.9	96.5
380	98182	2.5	17.3215	0.9	0.6787	2.6	0.0853	2.4	0.94	527.5	12.4	526.0	10.7	519.6	19.5	527.5	12.4	101.5
192	83815	2.2	17.0666	1.0	0.6917	3.2	0.0856	3.0	0.95	529.6	15.3	533.8	13.1	552.0	22.0	529.6	15.3	95.9
386	69017	3.0	17.0029	0.8	0.6947	2.6	0.0857	2.5	0.95	529.8	12.7	535.6	10.9	560.2	17.5	529.8	12.7	94.6
1201	1153134	0.8	17.2134	0.7	0.6865	2.3	0.0857	2.2	0.95	530.1	11.1	530.7	9.4	533.3	14.9	530.1	11.1	99.4
132	11147	1.7	17.1297	1.3	0.6914	3.6	0.0859	3.4	0.93	531.2	17.3	533.6	15.1	544.0	28.4	531.2	17.3	97.7
172	13322	2.7	17.4074	1.1	0.6823	3.6	0.0861	3.4	0.95	532.7	17.3	528.2	14.7	508.7	25.2	532.7	17.3	104.7
271	59806	1.3	16.6738	1.1	0.7126	3.0	0.0862	2.8	0.93	532.9	14.4	546.3	12.8	602.6	23.8	532.9	14.4	88.4
391	45788	2.1	16.9616	1.2	0.7056	3.4	0.0868	3.2	0.93	536.6	16.4	542.1	14.3	565.5	26.3	536.6	16.4	94.9
345	33927	2.2	16.8545	1.1	0.7112	2.7	0.0869	2.5	0.92	537.4	12.9	545.4	11.4	579.3	22.9	537.4	12.9	92.8
269	28531	2.3	16.9182	1.0	0.7100	3.1	0.0871	2.9	0.95	538.4	15.1	544.7	13.0	571.1	21.0	538.4	15.1	94.3
160	9086	1.5	17.2598	1.3	0.6991	2.6	0.0875	2.3	0.87	540.8	11.8	538.3	10.9	527.4	27.8	540.8	11.8	102.5
415	229044	2.5	16.8185	1.0	0.7175	3.1	0.0875	3.0	0.95	540.9	15.4	549.2	13.3	583.9	21.4	540.9	15.4	92.6
168	52934	3.7	17.0774	1.4	0.7075	3.4	0.0876	3.2	0.92	541.5	16.4	543.3	14.5	550.7	29.8	541.5	16.4	98.3
850	110694	99.6	17.3387	0.8	0.6973	2.6	0.0877	2.4	0.95	541.8	12.7	537.2	10.7	517.4	16.7	541.8	12.7	104.7
215	21342	1.8	16.6578	1.3	0.7269	3.6	0.0878	3.4	0.94	542.6	17.7	554.7	15.5	604.7	27.6	542.6	17.7	89.7
621	46091	5.7	16.9691	0.7	0.7145	2.8	0.0879	2.7	0.97	543.3	13.9	547.4	11.7	564.5	15.4	543.3	13.9	96.2
852	124014	2.9	16.7424	0.7	0.7255	2.4	0.0881	2.3	0.96	544.3	12.1	553.9	10.3	593.8	14.3	544.3	12.1	91.7
240	55009	5.6	16.9868	1.1	0.7160	3.9	0.0882	3.7	0.96	545.0	19.4	548.3	16.4	562.2	23.7	545.0	19.4	96.9
165	12368	0.9	17.1622	1.4	0.7096	3.7	0.0883	3.4	0.93	545.6	17.8	544.5	15.5	539.9	30.2	545.6	17.8	101.1
769	224491	2.8	16.9767	0.9	0.7186	2.8	0.0885	2.6	0.94	546.5	13.6	549.8	11.7	563.5	19.7	546.5	13.6	97.0
260	83570	1.8	16.9328	0.9	0.7213	3.3	0.0886	3.2	0.96	547.2	16.6	551.4	14.1	569.2	20.5	547.2	16.6	96.1
501	426178	161.0	17.1252	0.8	0.7135	2.9	0.0886	2.8	0.96	547.4	14.9	546.8	12.5	544.5	17.5	547.4	14.9	100.5
724	30853	3.2	16.7454	0.8	0.7315	2.8	0.0888	2.7	0.95	548.7	14.0	557.5	12.0	593.4	18.2	548.7	14.0	92.5
333	22503	1.1	16.2778	1.3	0.7537	2.8	0.0890	2.5	0.89	549.5	13.0	570.3	12.1	654.4	27.1	549.5	13.0	84.0
129	14324	1.6	16.9801	1.3	0.7229	3.6	0.0890	3.4	0.93	549.8	17.8	552.4	15.5	563.1	29.4	549.8	17.8	97.6
230	21588	1.6	16.9768	1.3	0.7233	3.2	0.0891	2.9	0.90	550.0	15.0	552.6	13.4	563.5	29.3	550.0	15.0	97.6
379	61678	1.3	16.9275	1.0	0.7292	2.9	0.0895	2.7	0.93	552.7	14.2	556.1	12.3	569.9	22.3	552.7	14.2	97.0
148	231188	2.5	16.7747	1.0	0.7362	3.3	0.0896	3.2	0.95	553.0	16.8	560.2	14.4	589.6	22.2	553.0	16.8	93.8
453	121565	1.7	16.6167	0.9	0.7456	2.8	0.0899	2.7	0.95	554.7	14.2	565.7	12.2	610.0	19.2	554.7	14.2	90.9
422	42886	2.9	16.9044	0.6	0.7344	2.8	0.0900	2.8	0.97	555.7	14.7	559.1	12.2	572.8	14.0	555.7	14.7	97.0
367	1127103	3.5	17.1025	1.1	0.7265	2.4	0.0901	2.1	0.88	556.2	11.2	554.5	10.2	547.4	24.8	556.2	11.2	101.6
436	76133	1.7	16.8459	1.0	0.7377	2.5	0.0901	2.3	0.91	556.3	12.2	561.1	10.8	580.4	22.2	556.3	12.2	95.9
162	28691	1.4	16.8328	1.6	0.7389	3.5	0.0902	3.1	0.89	556.8	16.8	561.8	15.2	582.1	34.1	556.8	16.8	95.7
183	32859	1.7	16.9972	1.0	0.7318	3.1	0.0902	2.9	0.94	556.8	15.7	557.6	13.4	560.9	22.3	556.8	15.7	99.3
546	557214	6.2	16.7449	1.0	0.7434	2.8	0.0903	2.6	0.94	557.2	13.9	564.4	12.0	593.5	20.7	557.2	13.9	93.9
468	78400	14.3	16.9916	0.9	0.7331	2.8	0.0903	2.6	0.94	557.6	14.0	558.4	12.0	561.6	20.5	557.6	14.0	99.3
1814	318290	12.6	16.9139	0.8	0.7378	2.5	0.0905	2.4	0.95	558.5	12.8	561.1	10.8	571.6	16.6	558.5	12.8	97.7
578	240505	1.7	16.6453	1.0	0.7509	2.4	0.0906	2.2	0.92	559.4	11.8	568.7	10.5	606.3	21.0	559.4	11.8	92.3
151	3172979	63.4	16.3248	1.4	0.7661	3.5	0.0907	3.2	0.92	559.7	17.1	577.5	15.3	648.3	29.6	559.7	17.1	86.3
864	263309	2.4	17.0152	0.9	0.7352	2.4	0.0907	2.3	0.93	559.9	12.3	559.6	10.5	558.6	18.9	559.9	12.3	100.2
891	89561	12.1	17.0407	0.7	0.7348	2.4	0.0908	2.3	0.95	560.3	12.2	559.3	10.3	555.3	15.9	560.3	12.2	100.9
583	54509	3.4	16.8266	0.7	0.7473	2.5	0.0912	2.4	0.96	562.6	12.9	566.7	10.9	582.9	15.9	562.6	12.9	96.5

132	9723	1.1	17.0957	1.4	0.7370	3.2	0.0914	2.9	0.90	563.7	15.5	560.7	13.8	548.3	30.7	563.7	15.5	102.8
666	1180778	3.7	16.9888	0.8	0.7417	2.2	0.0914	2.1	0.93	563.7	11.2	563.4	9.7	562.0	18.4	563.7	11.2	100.3
706	60357	8.8	17.1048	0.7	0.7374	2.4	0.0915	2.3	0.95	564.3	12.4	560.9	10.4	547.1	15.8	564.3	12.4	103.1
383	173215	19.8	16.6197	1.1	0.7594	2.9	0.0915	2.7	0.93	564.6	14.8	573.7	12.9	609.7	23.3	564.6	14.8	92.6
755	200613	26.6	17.0391	0.7	0.7461	1.9	0.0922	1.7	0.92	568.6	9.3	566.0	8.0	555.6	15.8	568.6	9.3	102.3
479	301877	2.1	16.7326	1.2	0.7604	2.8	0.0923	2.6	0.91	569.0	13.9	574.2	12.3	595.0	25.5	569.0	13.9	95.6
338	19178	2.3	16.9295	0.9	0.7522	3.2	0.0924	3.1	0.96	569.5	16.9	569.5	14.1	569.6	18.7	569.5	16.9	100.0
427	44507	1.9	16.5991	1.0	0.7705	3.1	0.0928	2.9	0.95	571.8	16.0	580.0	13.6	612.3	21.8	571.8	16.0	93.4
289	32540	3.0	16.7786	1.1	0.7636	2.8	0.0929	2.5	0.92	572.8	13.9	576.1	12.1	589.1	23.5	572.8	13.9	97.2
129	15067	1.9	17.0161	1.4	0.7541	3.3	0.0931	3.0	0.91	573.6	16.6	570.6	14.5	558.5	30.6	573.6	16.6	102.7
283	192324	1.0	16.4454	0.8	0.7804	2.5	0.0931	2.3	0.94	573.7	12.9	585.7	11.0	632.4	17.6	573.7	12.9	90.7
1072	156304	13.9	16.9112	0.7	0.7596	2.4	0.0932	2.2	0.96	574.2	12.4	573.8	10.3	572.0	15.1	574.2	12.4	100.4
242	570917	10.8	16.8108	1.0	0.7692	2.5	0.0938	2.3	0.93	577.9	13.0	579.3	11.2	584.9	20.8	577.9	13.0	98.8
912	129962	2.3	16.6553	0.9	0.7785	2.7	0.0940	2.6	0.94	579.4	14.3	584.6	12.1	605.0	19.7	579.4	14.3	95.8
397	33200	0.8	16.6918	0.9	0.7776	2.4	0.0941	2.2	0.92	579.9	12.1	584.1	10.5	600.3	20.0	579.9	12.1	96.6
1205	470016	4.4	16.7074	0.8	0.7814	2.4	0.0947	2.2	0.95	583.2	12.5	586.3	10.5	598.3	16.4	583.2	12.5	97.5
1515	367305	8.8	16.5754	1.0	0.7896	2.6	0.0949	2.4	0.92	584.6	13.2	591.0	11.5	615.4	21.2	584.6	13.2	95.0
154	13091	4.9	16.9159	1.2	0.7748	3.0	0.0951	2.8	0.92	585.4	15.6	582.5	13.4	571.4	25.5	585.4	15.6	102.5
261	148685	3.4	16.7479	1.1	0.7837	2.8	0.0952	2.6	0.92	586.2	14.4	587.6	12.4	593.1	23.0	586.2	14.4	98.8
108	23064	1.6	16.4460	1.4	0.8012	3.9	0.0956	3.6	0.93	588.4	20.1	597.5	17.4	632.4	30.7	588.4	20.1	93.0
559	3874302	0.8	16.3924	0.8	0.8045	2.7	0.0956	2.5	0.96	588.8	14.3	599.4	12.0	639.4	16.6	588.8	14.3	92.1
245	34315	2.0	16.7210	0.8	0.7892	3.2	0.0957	3.1	0.96	589.2	17.3	590.7	14.3	596.5	18.1	589.2	17.3	98.8
594	12082546	1.8	16.5467	1.0	0.7979	2.6	0.0958	2.4	0.93	589.5	13.8	595.7	11.8	619.2	20.7	589.5	13.8	95.2
593	47325	4.2	16.8131	1.1	0.7863	2.6	0.0959	2.3	0.91	590.2	13.1	589.1	11.4	584.6	23.0	590.2	13.1	101.0
236	34900	2.2	16.6965	0.9	0.7948	3.0	0.0962	2.9	0.95	592.4	16.4	593.9	13.7	599.7	20.3	592.4	16.4	98.8
356	1596458	1.5	16.4663	0.7	0.8061	2.3	0.0963	2.2	0.95	592.5	12.5	600.3	10.5	629.7	15.6	592.5	12.5	94.1
504	95707	4.9	16.6280	0.8	0.7998	2.9	0.0964	2.8	0.96	593.6	15.6	596.7	13.0	608.6	18.2	593.6	15.6	97.5
383	141734	2.6	16.5078	1.1	0.8148	3.2	0.0975	3.0	0.94	600.0	17.3	605.1	14.6	624.2	23.4	600.0	17.3	96.1
651	429658	1.1	16.6311	0.7	0.8096	2.3	0.0977	2.2	0.95	600.7	12.3	602.3	10.3	608.2	15.9	600.7	12.3	98.8
1256	581371	5.1	16.6571	0.7	0.8107	2.2	0.0979	2.1	0.95	602.3	12.2	602.8	10.1	604.8	14.3	602.3	12.2	99.6
581	47636	4.4	16.6486	0.8	0.8161	2.7	0.0985	2.5	0.95	605.9	14.7	605.9	12.2	605.9	17.9	605.9	14.7	100.0
890	75384	1.4	16.6932	0.8	0.8143	2.6	0.0986	2.4	0.96	606.2	14.1	604.9	11.6	600.1	16.4	606.2	14.1	101.0
1284	114483	7.5	16.6571	0.9	0.8200	2.2	0.0991	2.0	0.92	608.9	11.8	608.1	10.1	604.8	18.7	608.9	11.8	100.7
794	331055	1.1	16.2103	1.1	0.8438	3.2	0.0992	3.1	0.95	609.7	17.9	621.2	15.1	663.3	22.7	609.7	17.9	91.9
473	1231820	5.7	16.7040	0.9	0.8193	2.4	0.0993	2.2	0.93	610.0	12.7	607.6	10.8	598.7	19.2	610.0	12.7	101.9
351	722722	2.8	16.4114	0.7	0.8339	2.5	0.0993	2.3	0.95	610.0	13.6	615.8	11.3	636.9	16.0	610.0	13.6	95.8
250	15061	1.2	16.7675	0.9	0.8201	2.8	0.0997	2.7	0.95	612.9	15.6	608.1	12.9	590.5	19.2	612.9	15.6	103.8
1397	137972	4.3	16.6555	0.6	0.8287	2.0	0.1001	1.9	0.95	615.0	11.2	612.9	9.3	605.0	13.7	615.0	11.2	101.7
910	786487	1.5	16.6725	0.9	0.8300	2.3	0.1004	2.1	0.92	616.5	12.6	613.6	10.7	602.8	19.4	616.5	12.6	102.3
359	208565	3.9	16.5758	1.0	0.8368	2.4	0.1006	2.2	0.91	617.9	13.1	617.4	11.3	615.4	21.8	617.9	13.1	100.4
351	62258	2.6	16.3799	1.0	0.8522	2.7	0.1012	2.5	0.93	621.7	14.9	625.8	12.7	641.0	22.0	621.7	14.9	97.0
573	150065	1.2	16.6135	0.8	0.8419	3.2	0.1014	3.1	0.97	622.9	18.5	620.2	14.9	610.5	17.7	622.9	18.5	102.0
245	120193	2.2	16.2873	0.9	0.8663	3.1	0.1023	3.0	0.96	628.1	17.8	633.6	14.7	653.2	19.5	628.1	17.8	96.2
1042	2011393	44.7	15.9747	0.8	0.8837	2.1	0.1024	2.0	0.92	628.4	11.7	643.0	10.1	694.6	17.9	628.4	11.7	90.5
1314	663548	16.2	16.2174	0.9	0.8731	2.7	0.1027	2.5	0.94	630.2	15.0	637.3	12.6	662.4	19.7	630.2	15.0	95.1
301	27786	1.1	16.3228	0.9	0.8681	2.7	0.1028	2.5	0.94	630.6	15.3	634.5	12.7	648.5	19.5	630.6	15.3	97.2
693	119878	1.0	15.5725	1.0	0.9148	2.8	0.1033	2.6	0.93	633.8	16.0	659.6	13.8	748.7	21.5	633.8	16.0	84.7
312	22810	1.4	16.3884	1.2	0.8715	2.8	0.1036	2.5	0.91	635.4	15.3	636.4	13.2	639.9	25.4	635.4	15.3	99.3
376	68900	4.7	16.2907	0.9	0.8780	3.5	0.1037	3.4	0.96	636.2	20.3	639.9	16.6	652.8	20.3	636.2	20.3	97.5
65	223359	2.8	15.5217	1.4	0.9244	3.7	0.1041	3.4	0.92	638.2	20.8	664.7	18.1	755.6	29.7	638.2	20.8	84.5
288	99493	1.4	16.5060	1.0	0.8703	3.4	0.1042	3.2	0.96	638.9	19.7	635.7	16.0	624.5	21.2	638.9	19.7	102.3
200	331862	0.8	15.4160	1.1	0.9319	3.2	0.1042	3.0	0.94	638.9	18.5	668.6	15.8	770.0	22.6	638.9	18.5	83.0
286	26579	2.5	16.2465	1.0	0.8853	3.1	0.1043	3.0	0.95	639.7	18.2	643.8	15.0	658.6	20.5	639.7	18.2	97.1
58	10655	2.1	15.7273	1.6	0.9169	4.9	0.1046	4.6	0.95	641.2	28.1	660.7	23.7	727.8	33.8	641.2	28.1	88.1
552	210134	1.9	16.4420	0.8	0.8773	2.5	0.1046	2.4	0.94	641.4	14.5	639.5	12.0	632.9	18.2	641.4	14.5	101.4
878	66211	6.4	15.8362	0.8	0.9194	2.8	0.1056	2.7	0.96	647.1	16.6	662.0	13.7	713.2	17.7	647.1	16.6	90.7
644	132771	2.9	16.1969	0.8	0.9026	2.5	0.1060	2.3	0.94	649.6	14.4	653.1	11.9	665.1	17.5	649.6	14.4	97.7
1270	682463	10.9	16.3608	0.8	0.8994	2.5	0.1067	2.3	0.94	653.7	14.4	651.4	11.9	643.5	18.1	653.7	14.4	101.6
318	91524	1.0	16.1118	0.9	0.9258	2.8	0.1082	2.7	0.95	662.2	16.9	665.4	13.9	676.4	19.5	662.2	16.9	97.9
250	63629	1.2	16.1169	0.7	0.9275	2.8	0.1084	2.7	0.96	663.5	17.1	666.3	13.7	675.7	15.9	663.5	17.1	98.2
510	107553	2.5	16.1453	0.7	0.9298	2.7	0.1089	2.6	0.96	666.2	16.4	667.5	13.1	672.0	15.6	666.2	16.4	99.1
610	622179	4.9	15.7099	1.0	0.9596	3.4	0.1093	3.2	0.95	668.9	20.5	683.1	16.9	730.2	21.7	668.9	20.5	91.6
1209	158317	3.9	16.1841	0.7	0.9330	2.5	0.1095	2.4	0.96	670.0	15.2	669.2	12.2	666.8	14.6	670.0	15.2	100.5
1054	707222	8.5	16.2102	0.8	0.9318	1.9	0.1095	1.8	0.92	670.1	11.3	668.6	9.5	663.3	16.5	670.1	11.3	101.0
1050	214725	3.1	16.3540	0.7	0.9267	2.3	0.1099	2.2	0.95	672.2	14.1	665.9	11.4	644.4	16.0	672.2	14.1	104.3
1013	141680	2.9	16.2492	0.6	0.9343	2.5	0.1101	2.4	0.97	673.4	15.4	669.9	12.2	658.2	13.5	673.4	15.4	102.3
336	2497308	1.6	15.8402	0.9	0.9629	2.4	0.1106	2.2	0.92	676.4	14.1	684.8	11.9	712.6	19.6	676.4	14.1	94.9
565	282166	1.8	16.0299	1.0	0.9675	2.7	0.1125	2.5	0.94	687.1	16.6	687.2	13.6	687.3	20.4	687.1	16.6	100.0
171	64648	1.1	16.1446	0.9	0.9625	2.8	0.1127	2.7	0.95	688.4	17.6	684.6	14.2	672.1	19.2	688.4	17.6	102.4
590	80887	2.8	15.9538	1.0	0.9821	2.1	0.1136	1.9	0.89	693.9	12.5	694.7	10.7	697.4	21.0	693.9	12.5	99.5
375	40785	3.3	15.9138	0.8	0.9898	2.8	0.1142	2.7	0.95	697.3	17.8	698.6	14.2	702.8	17.8	697.3	17.8	99.2
540	80555	2.5	16.0773	1.0	0.9857	2.6	0.1149	2.4	0.92	701.3	16.1	696.5	13.2	681.0	21.4	701.3	16.1	103.0
670	292174	6.0	15.5069	0.9	1.0298	3.1	0.1158	2.9	0.96	706.5	19.6	718.9	15.8	757.6	19.1	706.5	19.6	93.2
506	88750	3.4	15.8641	0.9	1.0128	3.0	0.1165	2.8	0.95	710.5	19.0	710.3	15.1	709.4	19.0	710.5	19.0	100.2
246	29972	3.0	15.4788	1.0	1.0437	2.9	0.1172	2.7	0.94	714.3	18.4	725.8	15.0	761.5	20.4	714.3	18.4	93.8
123	22091	1.9	15.5509	1.0	1.0562	4.1	0.1191	4.0	0.97	725.5	27.4	732.0	21.4	751.7	20.3	725.5	27.4	96.5
1015	113400	3.7	15.4358	0.7	1.0648	2.1	0.1192	2.0	0.95	726.0	13.9	736.2	11.2	767.3	13.9	726.0	13.9	94.6
258	29454	2.1	15.4407	1.1	1.0649	3.1	0.1193	2.9	0.94	726.3	20.0	736.2	16.3	766.7	22.6	726.3	20.0	94.7
128	39174	1.4	15.0436	1.0	1.1069	4.0	0.1208	3.8	0.97	735.0	26.6	756.7	21.2	821.3	21.6	735.0	26.6	89.5
358	128577	1.1	14.6574	0.9	1.1446	2.5	0.1217	2.4	0.94	740.2	16.6	774.7	13.8	875.4	18.6	740.2	16.6	84.6
341	311930	1.5	14.9599	0.9	1.1386	2.9	0.1235	2.8	0.96	750.9	19.7	771.9	15.7	833.0	17.9	750.9	19.7	90.1
457	56046	2.1	15.7769	0.6	1.0806	2.5	0.1236	2.5	0.97	751.5	17.4	743.9	13.4	721.1	13.4	751.5	17.4	104.2

457	56046	2.1	15.7769	0.6	1.0806	2.5	0.1236	2.5	0.97	751.5	17.4	743.9	13.4	721.1	13.4	751.5	17.4	104.2
93	33711	1.9	15.3163	1.2	1.1165	3.8	0.1240	3.6	0.95	753.7	25.7	761.3	20.4	783.7	24.9	753.7	25.7	96.2
421	543478	2.3	14.9810	0.7	1.1425	2.8	0.1241	2.7	0.96	754.3	18.9	773.7	14.9	830.0	15.5	754.3	18.9	90.9
309	58006	3.3	15.5196	1.1	1.1107	3.1	0.1250	2.9	0.93	759.4	20.7	758.5	16.5	755.9	23.1	759.4	20.7	100.5
213	164825	2.5	15.1555	1.2	1.1377	3.7	0.1251	3.5	0.95	759.6	24.9	771.4	19.9	805.8	25.1	759.6	24.9	94.3
131	48118	1.9	14.7950	0.9	1.1746	3.9	0.1260	3.8	0.97	765.2	27.1	788.8	21.2	856.0	19.6	765.2	27.1	89.4
1290	291019	4.3	14.5069	1.0	1.2295	2.7	0.1294	2.5	0.93	784.2	18.3	814.1	14.9	896.7	20.1	784.2	18.3	87.5
313	36968	3.2	15.1326	1.1	1.1886	2.6	0.1305	2.4	0.91	790.4	17.8	795.3	14.5	809.0	22.5	790.4	17.8	97.7
898	146566	5.6	14.2647	0.8	1.3037	2.3	0.1349	2.2	0.94	815.6	16.7	847.3	13.2	931.3	15.8	815.6	16.7	87.6
622	104451	1.4	14.1294	0.7	1.3231	2.5	0.1356	2.4	0.96	819.6	18.5	855.8	14.5	950.9	14.2	819.6	18.5	86.2
478	55174	1.8	14.5896	1.0	1.2899	3.1	0.1365	3.0	0.95	824.8	23.0	841.3	17.9	885.0	19.6	824.8	23.0	93.2
708	106762	2.8	14.4362	0.9	1.3314	2.7	0.1394	2.6	0.95	841.3	20.4	859.5	15.8	906.8	17.9	841.3	20.4	92.8
611	90656	2.1	14.4649	0.8	1.3381	2.6	0.1404	2.5	0.96	846.8	20.0	862.4	15.3	902.7	15.9	846.8	20.0	93.8
2944	6773029	1.9	14.6157	0.8	1.3416	2.2	0.1422	2.0	0.93	857.2	16.1	863.9	12.5	881.3	15.9	857.2	16.1	97.3
237	35561	2.7	14.4039	0.9	1.4496	2.6	0.1514	2.4	0.94	909.0	20.7	909.7	15.6	911.4	18.1	911.4	18.1	99.7
834	101615	3.2	14.2339	0.8	1.5105	2.4	0.1559	2.2	0.94	934.1	19.4	934.6	14.5	935.8	16.4	935.8	16.4	99.8
677	63562	2.6	14.1281	1.2	1.3905	3.5	0.1425	3.3	0.94	858.7	26.7	884.9	20.9	951.1	25.4	951.1	25.4	90.3
143	27991	2.2	14.1267	1.1	1.6004	2.8	0.1640	2.5	0.92	978.8	23.1	970.4	17.2	951.3	21.8	951.3	21.8	102.9
380	974585	2.7	13.9778	0.8	1.5556	2.4	0.1577	2.2	0.95	944.0	19.6	952.7	14.6	973.0	15.5	973.0	15.5	97.0
543	90110	3.0	13.9734	0.9	1.5679	2.6	0.1589	2.5	0.94	950.6	21.8	957.6	16.2	973.6	17.7	973.6	17.7	97.6
857	129111	3.2	13.9695	0.7	1.5480	2.5	0.1568	2.4	0.95	939.2	20.7	949.7	15.3	974.1	15.1	974.1	15.1	96.4
1584	1355098	4.7	13.8961	0.8	1.5851	2.1	0.1598	1.9	0.93	955.4	17.3	964.4	13.1	984.9	16.1	984.9	16.1	97.0
640	78972	2.9	13.8859	0.7	1.6447	2.0	0.1656	1.8	0.93	988.0	16.7	987.5	12.4	986.4	14.3	986.4	14.3	100.2
219	25746	1.3	13.8745	1.0	1.5670	3.3	0.1577	3.2	0.96	943.9	28.1	957.3	20.7	988.1	19.8	988.1	19.8	95.5
422	90244	1.5	13.8577	0.9	1.6716	2.5	0.1680	2.3	0.94	1001.1	21.3	997.8	15.6	990.5	17.4	990.5	17.4	101.1
619	161821	2.8	13.8534	0.7	1.7117	2.4	0.1720	2.3	0.96	1023.0	21.9	1012.9	15.4	991.2	13.7	991.2	13.7	103.2
361	49527	3.6	13.8313	0.9	1.5939	3.2	0.1599	3.1	0.96	956.2	27.2	967.8	20.0	994.4	19.0	994.4	19.0	96.2
508	622885	4.6	13.8091	0.8	1.5965	2.4	0.1599	2.3	0.94	956.2	20.1	968.9	15.0	997.6	16.6	997.6	16.6	95.8
181	63669	2.6	13.7607	0.8	1.5555	2.4	0.1552	2.3	0.95	930.3	20.1	952.7	15.1	1004.8	15.8	1004.8	15.8	92.6
414	314648	1.9	13.7603	0.9	1.7340	2.5	0.1731	2.3	0.93	1028.9	21.6	1021.2	15.8	1004.8	18.6	1004.8	18.6	102.4
209	63569	1.4	13.7390	0.9	1.6910	3.2	0.1685	3.0	0.96	1003.8	28.4	1005.1	20.2	1008.0	17.3	1008.0	17.3	99.6
341	1106727	1.9	13.7314	0.7	1.6442	2.8	0.1637	2.7	0.97	977.6	24.6	987.3	17.7	1009.1	14.2	1009.1	14.2	96.9
205	126524	2.5	13.7279	0.9	1.6002	2.5	0.1593	2.4	0.94	953.0	21.0	970.3	15.7	1009.6	17.3	1009.6	17.3	94.4
436	105092	1.4	13.7259	1.0	1.5940	2.7	0.1587	2.5	0.93	949.5	22.4	967.9	17.0	1009.9	19.6	1009.9	19.6	94.0
499	223018	7.8	13.7240	0.8	1.6260	3.0	0.1618	2.9	0.96	967.0	25.9	980.3	18.9	1010.2	16.7	1010.2	16.7	95.7
229	71918	2.3	13.7215	0.9	1.6697	3.3	0.1662	3.2	0.96	991.0	29.5	997.1	21.2	1010.6	19.1	1010.6	19.1	98.1
139	32299	2.2	13.7104	1.0	1.6357	4.0	0.1626	3.9	0.97	971.5	34.8	984.1	25.2	1012.2	21.0	1012.2	21.0	96.0
678	190306	4.8	13.7065	0.8	1.6493	3.1	0.1640	3.0	0.97	978.7	27.1	989.3	19.5	1012.8	16.1	1012.8	16.1	96.6
961	68051	7.9	13.6571	0.7	1.5701	2.8	0.1555	2.7	0.96	931.8	23.4	958.4	17.3	1020.1	15.1	1020.1	15.1	91.3
246	47445	1.7	13.6564	1.1	1.7706	4.3	0.1754	4.1	0.96	1041.6	39.9	1034.7	27.9	1020.2	22.8	1020.2	22.8	102.1
361	54736	6.9	13.6557	0.8	1.6193	2.8	0.1604	2.6	0.95	958.9	23.4	977.7	17.3	1020.3	16.8	1020.3	16.8	94.0
166	125114	3.3	13.6351	1.1	1.6052	3.0	0.1587	2.8	0.93	949.8	24.7	972.3	18.8	1023.4	22.0	1023.4	22.0	92.8
515	283552	1.5	13.6277	1.0	1.6955	2.6	0.1676	2.5	0.93	998.7	22.8	1006.8	16.9	1024.4	19.4	1024.4	19.4	97.5
100	10621	2.5	13.6088	1.0	1.7482	3.2	0.1725	3.0	0.94	1026.1	28.4	1026.5	20.5	1027.2	21.2	1027.2	21.2	99.9
459	77156	6.5	13.5876	0.8	1.7982	2.5	0.1772	2.3	0.94	1051.7	22.6	1044.8	16.1	1030.4	16.7	1030.4	16.7	102.1
1045	216955	2.4	13.5847	0.7	1.7058	2.2	0.1681	2.0	0.95	1001.4	18.9	1010.7	13.8	1030.8	13.7	1030.8	13.7	97.1
211	32335	2.5	13.5081	0.9	1.7667	2.9	0.1731	2.8	0.95	1029.1	26.2	1033.3	18.9	1042.3	19.1	1042.3	19.1	98.7
814	93550	4.0	13.5046	0.9	1.7937	2.7	0.1757	2.5	0.94	1043.4	24.4	1043.2	17.6	1042.8	18.7	1042.8	18.7	100.1
308	192217	2.1	13.4781	0.8	1.7905	2.9	0.1750	2.7	0.96	1039.7	26.4	1042.0	18.6	1046.8	16.3	1046.8	16.3	99.3
398	67341	2.6	13.4741	0.8	1.7823	2.5	0.1742	2.4	0.95	1035.1	23.1	1039.0	16.5	1047.4	15.9	1047.4	15.9	98.8
155	32541	2.6	13.4554	0.8	1.8287	3.3	0.1785	3.2	0.97	1058.5	31.3	1055.8	21.7	1050.2	16.3	1050.2	16.3	100.8
258	141439	3.1	13.4533	0.9	1.8074	3.1	0.1764	3.0	0.96	1047.0	28.6	1048.1	20.1	1050.5	17.5	1050.5	17.5	99.7
135	555186	4.0	13.4498	0.9	1.7778	3.6	0.1734	3.5	0.97	1031.0	33.4	1037.4	23.5	1051.0	17.6	1051.0	17.6	98.1
287	66365	2.0	13.4417	0.8	1.8063	2.9	0.1761	2.8	0.96	1045.6	26.8	1047.7	18.9	1052.2	16.8	1052.2	16.8	99.4
353	82292	0.9	13.4350	0.8	1.8570	2.5	0.1809	2.4	0.95	1072.1	23.9	1065.9	16.8	1053.2	15.9	1053.2	15.9	101.8
280	30082	2.1	13.4145	1.1	1.8085	3.0	0.1760	2.8	0.93	1044.8	26.8	1048.5	19.5	1056.3	21.8	1056.3	21.8	98.9
214	30782	2.5	13.3910	0.9	1.8116	3.4	0.1759	3.3	0.97	1044.8	31.7	1049.6	22.2	1059.8	17.5	1059.8	17.5	98.6
711	198094	2.7	13.3809	0.7	1.8062	2.5	0.1753	2.4	0.97	1041.2	23.4	1047.7	16.5	1061.4	13.3	1061.4	13.3	98.1
314	145151	2.8	13.3448	0.9	1.7768	2.4	0.1720	2.3	0.93	1022.9	21.4	1037.0	15.8	1066.8	18.1	1066.8	18.1	95.9
161	200753	1.8	13.3234	0.8	1.8508	3.0	0.1788	2.9	0.96	1060.7	28.2	1063.7	19.8	1070.0	16.1	1070.0	16.1	99.1
228	54160	2.7	13.3198	1.2	1.8036	3.3	0.1742	3.1	0.93	1035.4	29.3	1046.8	21.4	1070.6	23.5	1070.6	23.5	96.7
421	162551	1.7	13.3150	0.9	1.8882	2.6	0.1823	2.4	0.94	1079.8	23.9	1077.0	17.1	1071.3	18.3	1071.3	18.3	100.8
525	323420	3.4	13.2960	0.8	1.8385	2.4	0.1773	2.3	0.94	1052.2	22.1	1059.3	15.9	1074.2	16.5	1074.2	16.5	98.0
276	214227	3.0	13.2895	0.8	1.7958	2.5	0.1731	2.3	0.94	1029.1	22.3	1043.9	16.3	1075.1	16.8	1075.1	16.8	95.7
326	66741	1.7	13.2486	0.9	1.8633	3.1	0.1790	3.0	0.96	1061.7	29.1	1068.2	20.5	1081.3	18.0	1081.3	18.0	98.2
107	15323	2.4	13.2372	1.1	1.9409	3.2	0.1863	3.0	0.94	1101.5	30.9	1095.3	21.7	1083.0	22.2	1083.0	22.2	101.7
611	66181	1.7	13.2016	0.9	1.8923	2.6	0.1812	2.4	0.94	1073.4	24.1	1078.4	17.2	1088.4	17.4	1088.4	17.4	98.6
79	589613	2.1	13.1711	1.2	1.9276	3.6	0.1841	3.4	0.94	1089.5	34.2	1090.7	24.1	1093.0	23.7	1093.0	23.7	99.7
221	53548	1.0	13.1623	0.8	1.9911	2.6	0.1901	2.5	0.95	1121.8	26.0	1112.5	17.9	1094.4	15.9	1094.4	15.9	102.5
514	110193	5.4	13.1591	0.9	1.8525	3.1	0.1768	3.0	0.96	1049.5	28.9	1064.3	20.5	1094.9	17.9	1094.9	17.9	95.9
313	107394	2.1	13.1396	0.9	1.9235	2.9	0.1833	2.7	0.95	1085.0	27.4	1089.3	19.4	1097.8	18.6	1097.8	18.6	98.8
639	4888312	7.2	13.1290	0.8	1.9180	2.6	0.1826	2.4	0.95	1081.3	24.1	1087.4	17.1	1099.5	16.3	1099.5	16.3	98.4
728	487644	2.9	13.1213	0.8	1.9071	2.5	0.1815	2.3	0.95	1075.1	23.1	1083.6	16.5	1100.6	16.0	1100.6	16.0	97.7
147	41971	3.0	13.1148	0.8	1.8848	2.9	0.1793	2.8	0.96	1063.1	27.4	1075.8	19.3	1101.6	16.2	1101.6	16.2	96.5
194	36755	3.0	13.1094	0.8	1.9187	3.3	0.1824	3.2	0.97	1080.2	32.1	1087.6	22.3	1102.5	16.9	1102.5	16.9	98.0
127	29092	1.6	13.1084	1.0	1.9324	3.0	0.1837	2.9	0.94	1087.2	28.6	1092.4	20.4	1102.6	20.7	1102.6	20.7	98.6
201	131268	2.6	13.1014	0.9	1.8410	3.2	0.1749	3.1	0.96	1039.2	29.6	1060.2	21.2	1103.7	18.1	1103.7	18.1	94.2
583	148699	2.9	13.0954	0.6	1.9127	2.4	0.1817	2.3	0.97	1076.0	22.8	1085.5	15.9	1104.6	12.2	1104.6	12.2	97.4
452	147360	1.9	13.0941	0.7	1.9009	2.5	0.1805	2.4	0.95	1069.8	23.4	1081.4	16.6	1104.8	15.0	1104.8	15.0	96.8
125	16528	2.5	13.0914	1.0	1.8854	3.3	0.1790	3.2	0.95	1061.6	31.0	1076.0	22.1	1105.2	20.9	1105.2	20.9	96.1
550	88213	3.2	13.0477	0.9	1.9311	2.7	0.1827	2.5	0.94	1081.9	25.3	1091.9	18.1	1111.9	18.5	1111.9	18.5	97.3
192	89152	1.8	13.0368	0.8	1.9636	3.0	0.1857	2.9	0.96	1097.9	28.9	1103.1	20.0	1113.5	16.6	1113.5	16.6	98.6

192	89152	1.8	13.0368	0.8	1.9636	3.0	0.1857	2.9	0.96	1097.9	28.9	1103.1	20.0	1113.5	16.6	1113.5	16.6	98.6
266	19524	1.7	13.0239	0.7	1.9376	2.5	0.1830	2.4	0.96	1083.5	23.7	1094.2	16.7	1115.5	14.6	1115.5	14.6	97.1
498	60067	2.2	13.0208	0.7	1.9285	2.7	0.1821	2.7	0.97	1078.5	26.4	1091.0	18.4	1116.0	13.5	1116.0	13.5	96.6
98	55538	1.5	12.9794	1.0	2.0029	3.3	0.1885	3.2	0.96	1113.5	32.6	1116.5	22.6	1122.3	19.0	1122.3	19.0	99.2
114	93134	1.2	12.9638	1.1	2.0009	3.1	0.1881	2.9	0.93	1111.2	29.6	1115.8	21.1	1124.7	22.8	1124.7	22.8	98.8
310	124626	2.4	12.9295	0.9	2.0525	3.1	0.1925	2.9	0.96	1134.7	30.4	1133.1	20.9	1130.0	17.8	1130.0	17.8	100.4
43	9165	1.2	12.8366	1.8	1.9704	5.8	0.1834	5.5	0.95	1085.7	54.9	1105.4	38.9	1144.4	35.3	1144.4	35.3	94.9
1952	300422	40.4	12.8193	0.9	1.9567	2.8	0.1819	2.6	0.95	1077.5	26.1	1100.7	18.7	1147.1	18.0	1147.1	18.0	93.9
248	74095	1.2	12.8163	0.8	2.0489	2.5	0.1904	2.4	0.95	1123.8	24.6	1131.9	17.2	1147.5	16.3	1147.5	16.3	97.9
240	24983	2.8	12.7543	0.9	2.1252	3.2	0.1966	3.1	0.96	1157.0	33.0	1157.0	22.4	1157.1	17.3	1157.1	17.3	100.0
197	27697	1.8	12.6386	1.0	2.2205	3.1	0.2035	2.9	0.94	1194.3	31.8	1187.5	21.7	1175.2	20.5	1175.2	20.5	101.6
1817	3259861	10.5	12.5679	0.8	2.0939	2.4	0.1909	2.3	0.94	1126.1	23.4	1146.8	16.5	1186.3	15.7	1186.3	15.7	94.9
669	21458	6.7	12.2288	0.8	2.0363	2.4	0.1806	2.3	0.95	1070.2	22.7	1127.7	16.6	1240.1	15.5	1240.1	15.5	86.3
187	94642	2.6	12.1849	0.9	2.3184	2.4	0.2049	2.2	0.92	1201.5	24.6	1217.9	17.3	1247.2	18.3	1247.2	18.3	96.3
276	257430	1.7	12.0644	0.9	2.4622	3.8	0.2154	3.7	0.97	1257.8	42.0	1261.0	27.4	1266.6	18.5	1266.6	18.5	99.3
206	593783	2.4	11.8732	0.8	2.7217	2.8	0.2344	2.6	0.96	1357.4	32.2	1334.4	20.4	1297.7	15.7	1297.7	15.7	104.6
293	107261	2.6	11.8589	0.9	2.3365	3.4	0.2010	3.3	0.96	1180.5	35.4	1223.4	24.3	1300.0	18.3	1300.0	18.3	90.8
279	59471	1.5	11.7014	0.6	2.7956	2.9	0.2373	2.9	0.98	1372.4	35.6	1354.4	22.0	1326.0	11.7	1326.0	11.7	103.5
511	26468	1.2	11.4280	0.8	2.4606	3.8	0.2039	3.7	0.98	1196.5	40.8	1260.5	27.7	1371.6	16.3	1371.6	16.3	87.2
419	76132	1.4	11.2264	0.6	2.9455	2.3	0.2398	2.2	0.97	1385.8	27.5	1393.7	17.2	1405.8	10.6	1405.8	10.6	98.6
305	42844	1.4	11.1242	0.7	2.8697	2.3	0.2315	2.1	0.94	1342.5	26.0	1374.0	17.1	1423.3	14.3	1423.3	14.3	94.3
196	75127	1.5	11.1097	0.9	3.0424	3.4	0.2451	3.3	0.97	1413.4	41.4	1418.3	25.8	1425.8	16.8	1425.8	16.8	99.1
324	1096932	0.9	11.1082	0.9	3.0083	2.9	0.2424	2.7	0.95	1399.0	34.4	1409.7	22.0	1426.0	17.5	1426.0	17.5	98.1
135	45488	1.2	11.0419	1.0	3.0214	3.0	0.2420	2.8	0.95	1396.9	35.5	1413.0	22.8	1437.4	18.5	1437.4	18.5	97.2
154	24648	1.7	10.3713	1.1	3.4358	2.9	0.2584	2.7	0.93	1481.8	35.4	1512.6	22.7	1556.0	20.6	1556.0	20.6	95.2
618	146886	5.1	10.1241	0.8	3.4058	2.6	0.2501	2.4	0.95	1438.9	31.5	1505.7	20.1	1601.1	14.7	1601.1	14.7	89.9
477	321117	4.4	10.0437	0.6	3.4477	2.2	0.2511	2.1	0.96	1444.4	27.5	1515.3	17.5	1615.9	12.1	1615.9	12.1	89.4
324	116616	2.8	9.9455	1.0	3.9031	2.3	0.2815	2.0	0.90	1599.1	29.0	1614.3	18.4	1634.2	18.6	1634.2	18.6	97.9
113	179551	1.6	9.7913	0.8	4.2137	3.0	0.2992	2.9	0.96	1687.5	43.0	1676.7	24.7	1663.2	15.2	1663.2	15.2	101.5
272	17058	1.6	9.5924	0.9	3.7866	3.0	0.2634	2.9	0.95	1507.4	38.6	1589.9	24.2	1701.1	16.8	1701.1	16.8	88.6
161	35751	1.2	9.4833	0.8	4.5012	2.6	0.3096	2.4	0.95	1738.7	37.0	1731.2	21.2	1722.1	14.5	1722.1	14.5	101.0
289	156118	1.4	9.3444	0.8	4.6918	2.7	0.3180	2.6	0.95	1779.8	40.7	1765.8	22.9	1749.2	14.9	1749.2	14.9	101.8
427	431401	4.0	9.3174	0.7	4.6166	2.6	0.3120	2.5	0.96	1750.4	37.9	1752.3	21.6	1754.5	13.6	1754.5	13.6	99.8
116	23143	0.4	9.2932	0.9	3.9849	3.9	0.2686	3.8	0.97	1533.6	52.5	1631.1	32.0	1759.2	16.2	1759.2	16.2	87.2
1605	136509	1.1	9.2737	0.6	3.7338	1.9	0.2511	1.8	0.96	1444.3	23.6	1578.6	15.3	1763.1	10.1	1763.1	10.1	81.9
292	197483	2.2	9.1289	0.6	4.9081	2.6	0.3250	2.6	0.97	1813.9	40.5	1803.7	22.2	1791.8	11.0	1791.8	11.0	101.2
275	1105204	3.0	9.0799	0.8	4.6518	2.4	0.3063	2.2	0.94	1722.7	34.0	1758.6	19.9	1801.6	14.6	1801.6	14.6	95.6
153	54131	1.4	9.0308	0.9	5.0640	3.4	0.3317	3.3	0.96	1846.5	52.3	1830.1	28.7	1811.4	16.7	1811.4	16.7	101.9
325	84420	1.1	8.8988	1.0	4.6012	3.2	0.2970	3.1	0.95	1676.2	45.5	1749.5	27.0	1838.1	18.1	1838.1	18.1	91.2
229	9668644	2.0	8.8613	0.8	5.2262	3.0	0.3359	2.8	0.96	1866.8	46.0	1856.9	25.2	1845.8	14.7	1845.8	14.7	101.1
567	730479	1.6	8.8259	0.7	5.1459	2.6	0.3294	2.5	0.96	1835.5	39.6	1843.7	21.9	1853.0	12.3	1853.0	12.3	99.1
243	89315	1.6	8.7922	0.8	5.3330	2.6	0.3401	2.5	0.96	1887.0	41.1	1874.2	22.5	1860.0	13.9	1860.0	13.9	101.5
238	35575	1.7	8.6785	0.8	4.6067	2.8	0.2900	2.7	0.96	1641.3	38.9	1750.5	23.3	1883.4	13.7	1883.4	13.7	87.1
198	367433	2.0	8.5597	1.0	5.7821	3.6	0.3590	3.5	0.96	1977.2	58.8	1943.7	31.0	1908.2	17.2	1908.2	17.2	103.6
839	706755	1.3	8.4099	0.8	4.7258	3.0	0.2882	2.8	0.96	1632.8	41.1	1771.8	24.8	1939.9	14.2	1939.9	14.2	84.2
1112	323571	1.2	8.3052	0.4	5.8893	1.6	0.3547	1.5	0.96	1957.2	25.5	1959.7	13.6	1962.2	7.4	1962.2	7.4	99.7
111	108846	1.4	6.2383	1.0	8.1221	4.8	0.3675	4.7	0.98	2017.5	81.6	2244.7	43.6	2458.8	17.2	2458.8	17.2	82.1
256	978899	1.9	6.2200	0.7	10.1230	2.6	0.4567	2.5	0.96	2424.8	51.1	2446.1	24.3	2463.8	11.8	2463.8	11.8	98.4
150	1978869	1.6	5.4606	0.8	11.3237	3.6	0.4485	3.5	0.97	2388.4	69.1	2550.2	33.2	2681.4	13.8	2681.4	13.8	89.1
221	208574	2.3	5.2125	0.6	12.7920	3.0	0.4836	2.9	0.98	2542.9	61.4	2664.5	28.0	2758.1	9.1	2758.1	9.1	92.2
144	87870	1.0	4.9912	0.6	13.0588	3.2	0.4727	3.2	0.98	2495.5	66.0	2683.9	30.5	2829.1	9.3	2829.1	9.3	88.2
43	67377	1.1	4.0306	0.7	18.8529	4.5	0.5511	4.4	0.99	2829.8	101.6	3034.3	43.2	3172.7	10.3	3172.7	10.3	89.2

MAM2

					Isotope ratios						Apparent ages (Ma)								
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
339	101692	2.5	17.5307	1.0	0.6197	2.4	0.0788	2.2	0.90	488.9	10.3	489.6	9.4	493.2	23.0	488.9	10.3	99.1
131	30299	1.3	17.7255	1.0	0.6138	2.7	0.0789	2.5	0.93	489.6	11.9	485.9	10.6	468.8	22.9	489.6	11.9	104.4
483	123538	1.1	16.6048	0.8	0.6584	2.1	0.0793	1.9	0.92	491.9	9.1	513.7	8.4	611.6	17.2	491.9	9.1	80.4
198	14317	1.9	16.9315	1.2	0.6478	2.9	0.0795	2.6	0.91	493.4	12.4	507.1	11.4	569.4	26.1	493.4	12.4	86.7
501	63712	2.0	17.1408	0.9	0.6420	2.5	0.0798	2.4	0.93	495.0	11.2	503.6	10.1	542.6	20.4	495.0	11.2	91.2
495	59320	2.3	17.6528	0.9	0.6239	2.6	0.0799	2.4	0.93	495.4	11.7	492.3	10.2	477.8	20.9	495.4	11.7	103.7
799	72913	2.1	17.3493	0.8	0.6352	2.5	0.0799	2.3	0.94	495.7	11.1	499.3	9.8	516.1	18.3	495.7	11.1	96.1
226	127808	2.0	17.1580	1.1	0.6438	2.9	0.0801	2.7	0.93	496.8	12.8	504.6	11.4	540.4	23.1	496.8	12.8	91.9
182	109860	1.2	17.1425	1.1	0.6465	2.8	0.0804	2.5	0.92	498.4	12.2	506.3	11.0	542.3	23.2	498.4	12.2	91.9
193	88215	1.7	17.5124	0.8	0.6337	3.0	0.0805	2.9	0.96	499.0	13.8	498.4	11.8	495.5	17.8	499.0	13.8	100.7
559	60600	2.2	17.4516	0.8	0.6367	2.3	0.0806	2.1	0.94	499.7	10.3	500.3	9.0	503.2	17.4	499.7	10.3	99.3
203	31025	1.5	17.5240	1.0	0.6346	3.4	0.0807	3.2	0.95	500.1	15.4	499.0	13.2	494.0	22.0	500.1	15.4	101.2
110	106980	0.8	17.1388	1.1	0.6494	3.6	0.0807	3.4	0.95	500.4	16.6	508.1	14.5	542.8	23.7	500.4	16.6	92.2
296	108140	1.4	17.3095	0.9	0.6443	2.8	0.0809	2.7	0.94	501.4	12.8	504.9	11.2	521.1	20.2	501.4	12.8	96.2
211	48449	2.5	17.5954	0.9	0.6342	3.0	0.0809	2.9	0.96	501.7	13.9	498.7	11.8	485.1	18.8	501.7	13.9	103.4
535	242903	1.2	17.2887	0.8	0.6464	2.1	0.0811	2.0	0.92	502.4	9.5	506.3	8.5	523.7	18.0	502.4	9.5	95.9
401	1373728	2.3	17.5322	0.8	0.6437	2.3	0.0818	2.2	0.94	507.1	10.5	504.6	9.2	493.0	17.9	507.1	10.5	102.9
1148	989450	9.4	17.0402	0.6	0.6633	2.0	0.0820	1.9	0.95	507.9	9.4	516.7	8.2	555.4	13.4	507.9	9.4	91.5
659	18785	2.5	17.2492	0.6	0.6569	1.9	0.0822	1.8	0.95	509.1	8.9	512.7	7.7	528.8	13.7	509.1	8.9	96.3
118	11666	2.1	17.4481	1.0	0.6508	3.0	0.0824	2.9	0.95	510.2	14.1	509.0	12.1	503.6	21.6	510.2	14.1	101.3
170	32000	1.4	16.7786	1.3	0.6780	3.2	0.0825	2.9	0.91	511.1	14.2	525.6	13.0	589.1	28.1	511.1	14.2	86.8
141	37540	2.4	17.1977	1.2	0.6632	2.7	0.0827	2.5	0.91	512.3	12.2	516.6	11.1	535.3	25.4	512.3	12.2	95.7
171	97324	1.6	17.0325	1.1	0.6704	2.8	0.0828	2.5	0.91	512.9	12.3	521.0	11.2	556.4	25.0	512.9	12.3	92.2
565	30603	2.2	16.5733	0.7	0.6903	2.0	0.0830	1.9	0.94	513.8	9.3	533.0	8.3	615.7	15.3	513.8	9.3	83.5
328	14820	1.6	16.6292	1.3	0.6882	2.6	0.0830	2.2	0.87	514.0	11.1	531.7	10.7	608.4	27.1	514.0	11.1	84.5
128	142514	2.1	16.8666	1.2	0.6807	2.8	0.0833	2.5	0.91	515.6	12.6	527.2	11.5	577.7	25.3	515.6	12.6	89.3
376	229195	4.0	17.1975	0.9	0.6692	2.1	0.0835	1.9	0.91	516.8	9.3	520.2	8.4	535.4	18.9	516.8	9.3	96.5
66	58177	1.9	16.9803	1.3	0.6779	3.9	0.0835	3.7	0.94	516.9	18.3	525.5	16.0	563.1	28.2	516.9	18.3	91.8
245	111041	2.2	17.4594	0.9	0.6599	3.0	0.0836	2.9	0.96	517.4	14.2	514.6	12.1	502.2	19.2	517.4	14.2	103.0
203	34446	1.8	16.9631	1.4	0.6827	2.8	0.0840	2.4	0.87	519.9	12.2	528.4	11.5	565.3	29.8	519.9	12.2	92.0
124	21251	1.6	16.7419	1.2	0.6927	3.1	0.0841	2.8	0.91	520.6	13.9	534.4	12.7	593.8	26.9	520.6	13.9	87.7
443	84718	1.7	17.3875	0.8	0.6670	1.8	0.0841	1.6	0.89	520.7	8.1	518.9	7.4	511.2	18.2	520.7	8.1	101.8
193	17759	2.4	17.4673	1.0	0.6657	3.6	0.0843	3.5	0.96	521.9	17.5	518.1	14.7	501.2	21.9	521.9	17.5	104.1
124	16313	2.3	17.2618	0.9	0.6738	2.9	0.0844	2.8	0.95	522.0	13.9	523.0	11.9	527.2	20.5	522.0	13.9	99.0
1105	853595	4.7	17.1737	0.8	0.6775	2.2	0.0844	2.1	0.94	522.2	10.5	525.2	9.1	538.4	17.3	522.2	10.5	97.0
297	19702	2.2	17.4529	0.9	0.6682	2.1	0.0846	1.9	0.90	523.4	9.6	519.6	8.6	503.0	20.6	523.4	9.6	104.1
192	25957	1.7	17.4309	1.1	0.6700	2.7	0.0847	2.4	0.91	524.1	12.2	520.7	10.9	505.8	23.9	524.1	12.2	103.6
103	31186	1.7	17.3761	1.2	0.6727	2.6	0.0848	2.3	0.89	524.6	11.7	522.3	10.6	512.7	25.7	524.6	11.7	102.3
78	73362	1.8	17.3027	1.5	0.6772	4.1	0.0850	3.8	0.93	525.8	19.3	525.1	16.8	522.0	33.1	525.8	19.3	100.7
382	69798	2.1	17.1834	0.9	0.6838	2.5	0.0852	2.3	0.93	527.2	11.8	529.1	10.3	537.2	19.7	527.2	11.8	98.1
131	220948	2.0	17.1080	0.9	0.6869	2.5	0.0852	2.3	0.92	527.2	11.6	530.9	10.2	546.7	20.5	527.2	11.6	96.4
193	839566	1.8	16.8812	1.1	0.6969	2.9	0.0853	2.6	0.92	527.8	13.4	536.9	12.0	575.8	24.5	527.8	13.4	91.7
469	496906	2.5	17.1890	0.9	0.6846	2.5	0.0853	2.4	0.94	527.9	12.1	529.5	10.5	536.4	19.3	527.9	12.1	98.4
168	19649	2.6	16.4270	1.0	0.7167	2.7	0.0854	2.5	0.93	528.2	12.6	548.7	11.4	634.9	21.8	528.2	12.6	83.2
147	59420	2.2	17.2126	1.1	0.6850	2.6	0.0855	2.4	0.91	528.9	12.0	529.8	10.7	533.4	23.0	528.9	12.0	99.2
190	79046	1.8	17.3357	1.2	0.6802	3.2	0.0855	2.9	0.92	529.0	14.9	526.9	13.1	517.8	27.3	529.0	14.9	102.2
864	511820	2.6	17.2946	0.7	0.6842	2.3	0.0858	2.2	0.95	530.8	11.3	529.3	9.6	523.0	15.4	530.8	11.3	101.5
307	18849	1.9	16.6894	1.0	0.7125	2.6	0.0862	2.3	0.92	533.3	12.0	546.3	10.8	600.6	21.6	533.3	12.0	88.8
196	53719	2.0	17.2447	0.9	0.6909	2.4	0.0864	2.2	0.93	534.2	11.5	533.3	10.1	529.4	20.0	534.2	11.5	100.9
150	15472	2.0	17.3104	1.1	0.6886	3.0	0.0865	2.8	0.93	534.5	14.4	532.0	12.5	521.0	25.0	534.5	14.4	102.6
270	52756	2.6	17.1332	0.7	0.6959	2.7	0.0865	2.6	0.97	534.6	13.2	536.3	11.1	543.5	15.1	534.6	13.2	98.4
177	50160	1.4	17.0309	1.0	0.7012	2.4	0.0866	2.2	0.90	535.5	11.3	539.5	10.2	556.6	22.7	535.5	11.3	96.2
253	196093	2.0	17.0471	0.8	0.7011	2.2	0.0867	2.1	0.93	535.9	10.6	539.5	9.3	554.5	17.9	535.9	10.6	96.6
587	118329	2.5	17.1372	0.8	0.6975	2.3	0.0867	2.2	0.94	536.0	11.3	537.3	9.7	543.0	16.9	536.0	11.3	98.7
569	161953	2.3	16.5219	0.9	0.7263	2.1	0.0870	1.9	0.91	538.0	9.7	554.4	8.9	622.4	18.5	538.0	9.7	86.4
217	20850	21.7	16.8374	0.9	0.7134	2.4	0.0871	2.2	0.93	538.4	11.6	546.7	10.3	581.5	19.9	538.4	11.6	92.6
555	117582	1.8	17.0450	0.8	0.7063	2.1	0.0873	1.9	0.93	539.6	10.0	542.6	8.7	554.8	16.5	539.6	10.0	97.3
85	5819	1.1	17.0442	1.3	0.7106	3.4	0.0878	3.1	0.92	542.7	16.4	545.1	14.4	554.9	29.2	542.7	16.4	97.8
421	235480	32.4	16.9620	0.7	0.7148	2.6	0.0879	2.5	0.96	543.3	12.8	547.6	10.8	565.4	15.1	543.3	12.8	96.1
261	77227	2.3	17.2847	1.0	0.7015	2.3	0.0879	2.1	0.91	543.3	11.1	539.7	9.8	524.2	20.9	543.3	11.1	103.6
53	8907	2.2	16.6041	1.9	0.7315	4.3	0.0881	3.9	0.90	544.2	20.3	557.4	18.5	611.7	40.0	544.2	20.3	89.0
200	54295	2.7	17.1507	0.8	0.7085	2.6	0.0881	2.5	0.95	544.5	13.0	543.9	11.0	541.3	17.0	544.5	13.0	100.6
250	41966	1.2	16.8495	1.0	0.7213	2.8	0.0881	2.6	0.94	544.5	13.7	551.4	11.9	579.9	20.6	544.5	13.7	93.9
205	37328	1.5	17.1249	0.9	0.7109	2.4	0.0883	2.2	0.93	545.4	11.7	545.3	10.2	544.6	19.6	545.4	11.7	100.2
302	37326	5.4	16.9735	0.8	0.7178	2.4	0.0884	2.2	0.95	545.9	11.7	549.4	10.0	563.9	16.9	545.9	11.7	96.8
175	46616	8.6	16.8833	1.0	0.7221	2.6	0.0884	2.4	0.92	546.2	12.4	551.9	11.0	575.6	22.6	546.2	12.4	94.9
236	9063	1.9	16.6068	0.9	0.7367	2.5	0.0887	2.4	0.94	548.0	12.4	560.5	10.8	611.3	18.8	548.0	12.4	89.6
1666	33036	6.8	16.3784	0.8	0.7506	2.2	0.0892	2.0	0.92	550.6	10.8	568.6	9.6	641.2	18.1	550.6	10.8	85.9

279	41406	2.6	16.9163	0.9	0.7275	2.8	0.0893	2.7	0.95	551.1	14.3	555.1	12.2	571.3	18.5	551.1	14.3	96.5
376	56633	7.5	16.8250	0.8	0.7322	2.1	0.0893	1.9	0.92	551.6	10.0	557.8	8.8	583.1	17.6	551.6	10.0	94.6
1065	363281	3.2	16.8899	0.6	0.7315	1.9	0.0896	1.8	0.95	553.2	9.7	557.5	8.2	574.7	12.9	553.2	9.7	96.3
722	31219	2.7	16.7747	1.2	0.7405	2.2	0.0901	1.9	0.85	556.0	9.9	562.7	9.4	589.6	25.1	556.0	9.9	94.3
163	8226	1.7	17.0941	1.1	0.7277	3.0	0.0902	2.8	0.93	556.8	15.1	555.2	13.0	548.5	23.7	556.8	15.1	101.5
104	15738	8.5	17.0582	1.4	0.7306	3.8	0.0904	3.5	0.92	557.8	18.8	556.9	16.3	553.1	31.5	557.8	18.8	100.8
238	424122	2.3	16.8934	0.9	0.7378	2.9	0.0904	2.7	0.94	557.9	14.7	561.1	12.5	574.3	20.6	557.9	14.7	97.1
659	995358	1.9	16.9247	0.9	0.7383	2.3	0.0906	2.2	0.92	559.2	11.6	561.4	10.1	570.3	20.2	559.2	11.6	98.1
288	17005	1.8	16.0650	1.1	0.7793	2.6	0.0908	2.4	0.90	560.3	12.6	585.1	11.6	682.6	24.2	560.3	12.6	82.1
276	78955	11.5	17.1834	0.8	0.7290	2.7	0.0908	2.6	0.95	560.6	13.8	555.9	11.6	537.2	18.2	560.6	13.8	104.4
204	23359	2.7	17.1520	0.9	0.7305	3.0	0.0909	2.9	0.96	560.7	15.5	556.9	12.9	541.2	19.2	560.7	15.5	103.6
494	80533	1.9	17.1094	1.0	0.7333	3.1	0.0910	3.0	0.95	561.4	15.9	558.5	13.4	546.6	21.9	561.4	15.9	102.7
307	50020	1.9	16.9676	0.8	0.7395	2.4	0.0910	2.2	0.94	561.5	12.1	562.1	10.3	564.7	18.1	561.5	12.1	99.4
782	61384	4.3	16.8998	0.7	0.7433	1.9	0.0911	1.8	0.94	562.1	9.5	564.3	8.2	573.5	14.2	562.1	9.5	98.0
114	32759	3.4	17.0836	1.2	0.7360	3.2	0.0912	3.0	0.92	562.6	16.0	560.0	13.8	549.9	26.8	562.6	16.0	102.3
199	22955	1.3	16.8162	0.8	0.7482	2.8	0.0912	2.7	0.96	562.9	14.8	567.2	12.4	584.2	16.3	562.9	14.8	96.4
514	51607	1.6	17.0233	0.6	0.7397	2.3	0.0913	2.2	0.96	563.4	11.9	562.2	9.9	557.6	13.2	563.4	11.9	101.0
293	24752	3.7	16.9080	1.0	0.7452	3.0	0.0914	2.8	0.95	563.7	15.3	565.5	13.0	572.4	20.9	563.7	15.3	98.5
751	75215	1.5	16.9346	0.7	0.7443	2.2	0.0914	2.0	0.95	563.9	11.0	564.9	9.3	569.0	14.4	563.9	11.0	99.1
222	11755	1.4	16.4391	1.1	0.7682	2.6	0.0916	2.3	0.90	565.0	12.4	578.7	11.3	633.3	24.4	565.0	12.4	89.2
1038	48896	3.9	16.7902	0.6	0.7552	2.0	0.0920	1.9	0.95	567.1	10.5	571.2	8.9	587.6	13.4	567.1	10.5	96.5
392	162336	9.9	16.8211	0.9	0.7541	2.7	0.0920	2.6	0.94	567.4	14.0	570.6	11.9	583.6	20.1	567.4	14.0	97.2
153	100829	1.4	16.8263	1.0	0.7548	2.6	0.0921	2.4	0.92	568.0	13.2	571.0	11.5	582.9	21.7	568.0	13.2	97.5
278	38578	1.9	17.1229	1.0	0.7421	2.5	0.0922	2.3	0.92	568.3	12.6	563.6	10.9	544.9	21.2	568.3	12.6	104.3
623	119040	5.8	16.9516	0.8	0.7533	2.4	0.0926	2.3	0.95	571.0	12.6	570.1	10.6	566.8	17.3	571.0	12.6	100.7
246	13121	1.8	16.0131	1.4	0.7984	2.5	0.0927	2.0	0.81	571.6	10.9	595.9	11.1	689.5	30.4	571.6	10.9	82.9
118	23314	0.5	16.7936	1.1	0.7626	3.6	0.0929	3.5	0.95	572.6	19.0	575.5	16.0	587.1	23.6	572.6	19.0	97.5
477	337651	5.6	16.7429	0.9	0.7670	2.7	0.0931	2.6	0.94	574.0	14.0	578.0	12.0	593.7	20.2	574.0	14.0	96.7
223	25279	2.3	16.5122	0.9	0.7786	3.4	0.0932	3.3	0.96	574.7	17.9	584.7	15.0	623.7	19.6	574.7	17.9	92.1
78	84357	2.7	16.4465	1.0	0.7945	3.5	0.0948	3.4	0.96	583.7	18.9	593.7	15.9	632.3	21.2	583.7	18.9	92.3
1332	77694	17.4	16.5842	0.7	0.7889	2.4	0.0949	2.3	0.96	584.4	13.1	590.6	11.0	614.3	15.0	584.4	13.1	95.1
222	15560	2.4	16.2624	0.8	0.8090	2.7	0.0954	2.6	0.95	587.5	14.4	601.9	12.3	656.5	18.1	587.5	14.4	89.5
1070	19189	13.2	16.2340	0.9	0.8141	2.0	0.0959	1.8	0.90	590.1	10.2	604.8	9.1	660.2	18.5	590.1	10.2	89.4
477	31914	56.9	16.4568	0.8	0.8035	2.3	0.0959	2.2	0.94	590.3	12.3	598.8	10.5	630.9	17.8	590.3	12.3	93.6
261	69269	2.2	16.8272	0.8	0.7864	2.9	0.0960	2.8	0.96	590.8	15.8	589.1	13.0	582.8	17.0	590.8	15.8	101.4
1390	60641	10.0	16.5264	0.6	0.8045	1.9	0.0964	1.8	0.96	593.5	10.3	599.4	8.6	621.8	12.0	593.5	10.3	95.4
99	305557	1.5	16.5410	1.4	0.8087	3.3	0.0970	3.0	0.91	596.9	17.1	601.7	15.0	619.9	30.3	596.9	17.1	96.3
238	39857	1.0	16.5309	0.9	0.8112	2.9	0.0973	2.7	0.95	598.3	15.6	603.1	13.1	621.2	19.6	598.3	15.6	96.3
133	6890	0.6	16.0189	0.8	0.8428	2.9	0.0979	2.8	0.96	602.2	15.9	620.7	13.4	688.7	17.9	602.2	15.9	87.4
146	41355	0.9	16.7245	1.1	0.8085	3.1	0.0981	2.9	0.93	603.1	16.5	601.6	13.9	596.0	23.7	603.1	16.5	101.2
262	317222	6.2	16.1590	0.8	0.8397	2.8	0.0984	2.7	0.96	605.1	15.7	619.0	13.1	670.1	16.8	605.1	15.7	90.3
257	44965	1.5	16.2057	0.8	0.8395	2.4	0.0987	2.3	0.94	606.6	13.1	618.9	11.2	664.0	18.0	606.6	13.1	91.4
954	315307	6.1	16.5563	0.6	0.8253	1.9	0.0991	1.8	0.95	609.1	10.4	611.0	8.7	617.9	12.8	609.1	10.4	98.6
198	606919	1.8	16.6673	1.1	0.8208	3.2	0.0992	3.0	0.94	609.8	17.5	608.5	14.7	603.5	24.4	609.8	17.5	101.1
220	7080	2.4	15.9957	1.0	0.8555	2.1	0.0993	1.8	0.87	610.0	10.8	627.7	9.9	691.9	22.1	610.0	10.8	88.2
255	8476231	2.6	16.4435	1.0	0.8324	2.7	0.0993	2.6	0.93	610.1	14.9	614.9	12.7	632.7	21.8	610.1	14.9	96.4
297	30157	8.4	16.6901	0.8	0.8229	2.5	0.0996	2.4	0.95	612.1	13.8	609.6	11.4	600.5	16.8	612.1	13.8	101.9
515	89567	4.4	16.4662	0.8	0.8391	2.7	0.1002	2.6	0.95	615.6	15.2	618.7	12.5	629.7	17.5	615.6	15.2	97.8
1294	315337	54.3	16.3426	0.8	0.8456	2.3	0.1002	2.1	0.94	615.7	12.6	622.2	10.6	645.9	16.9	615.7	12.6	95.3
320	38587	3.4	16.6817	0.8	0.8310	2.6	0.1005	2.5	0.95	617.6	14.5	614.2	11.9	601.6	17.0	617.6	14.5	102.7
370	16099	2.0	15.7148	2.0	0.8824	3.0	0.1006	2.3	0.75	617.8	13.3	642.3	14.4	729.5	42.7	617.8	13.3	84.7
209	106141	2.2	16.4969	1.0	0.8422	2.5	0.1008	2.3	0.91	618.9	13.3	620.4	11.5	625.7	22.4	618.9	13.3	98.9
197	130110	0.7	16.7596	0.8	0.8296	2.5	0.1008	2.4	0.95	619.3	14.2	613.4	11.6	591.5	16.7	619.3	14.2	104.7
156	20832	1.0	16.3580	1.0	0.8507	3.1	0.1009	3.0	0.94	619.8	17.5	625.0	14.7	643.9	22.5	619.8	17.5	96.3
790	1346089	2.8	16.3185	0.7	0.8568	1.9	0.1014	1.8	0.93	622.6	10.7	628.4	9.1	649.1	15.4	622.6	10.7	95.9
100	35195	2.8	16.4164	1.2	0.8533	3.6	0.1016	3.4	0.95	623.8	20.2	626.5	16.8	636.2	25.2	623.8	20.2	98.0
157	37510	1.6	16.7288	1.0	0.8382	2.7	0.1017	2.4	0.92	624.3	14.6	618.1	12.3	595.5	22.6	624.3	14.6	104.8
521	429878	1.6	16.3932	0.9	0.8604	2.9	0.1023	2.8	0.95	627.9	16.5	630.3	13.7	639.3	20.2	627.9	16.5	98.2
281	65487	2.7	15.9590	0.7	0.8846	1.7	0.1024	1.6	0.92	628.4	9.6	643.5	8.3	696.8	14.4	628.4	9.6	90.2
347	279029	1.1	16.2876	0.7	0.8683	2.0	0.1026	1.9	0.94	629.5	11.2	634.7	9.3	653.2	14.2	629.5	11.2	96.4
636	707774	7.8	16.3472	0.9	0.8663	3.7	0.1027	3.6	0.97	630.3	21.7	633.6	17.5	645.3	19.3	630.3	21.7	97.7
186	65637	2.1	15.8673	0.8	0.8967	2.7	0.1032	2.6	0.96	633.1	15.7	650.0	13.0	709.0	16.4	633.1	15.7	89.3
56	16008	1.5	16.3334	1.6	0.8717	4.2	0.1033	3.8	0.92	633.5	23.2	636.5	19.7	647.1	34.3	633.5	23.2	97.9
153	57444	1.8	16.4113	1.0	0.8710	3.3	0.1037	3.1	0.95	635.9	19.1	636.1	15.6	636.9	21.6	635.9	19.1	99.8
525	320065	3.4	16.3686	0.6	0.8757	2.7	0.1040	2.6	0.97	637.5	16.0	638.6	12.9	642.5	13.6	637.5	16.0	99.2
85	34028	1.1	16.2981	1.2	0.8824	3.6	0.1043	3.4	0.94	639.6	20.4	642.3	16.9	651.8	25.6	639.6	20.4	98.1
251	445179	0.7	16.1338	0.9	0.8917	2.6	0.1043	2.4	0.94	639.8	14.7	647.3	12.3	673.5	18.7	639.8	14.7	95.0
245	87538	2.9	16.5746	0.9	0.8682	2.6	0.1044	2.4	0.93	639.9	14.5	634.6	12.1	615.5	19.9	639.9	14.5	104.0
1281	225574	3.6	16.1029	0.7	0.8975	2.6	0.1048	2.5	0.97	642.6	15.4	650.4	12.5	677.6	14.4	642.6	15.4	94.8
261	69986	2.6	16.2906	0.8	0.8944	2.4	0.1057	2.2	0.95	647.6	13.8	648.8	11.4	652.8	16.5	647.6	13.8	99.2
260	26473	1.6	15.5441	1.0	0.9377	2.2	0.1057	1.9	0.88	647.8	11.7	671.7	10.6	752.6	21.2	647.8	11.7	86.1

211	212619	2.5	16.3618	0.9	0.8936	2.5	0.1060	2.3	0.93	649.7	14.3	648.3	11.9	643.4	20.1	649.7	14.3	101.0
503	46924	1.5	16.1470	0.7	0.9123	2.4	0.1068	2.3	0.95	654.3	14.2	658.3	11.6	671.7	15.9	654.3	14.2	97.4
342	60024	9.4	15.4854	1.1	0.9540	3.6	0.1071	3.4	0.95	656.1	21.4	680.2	17.8	760.6	23.1	656.1	21.4	86.3
615	1047266	14.1	16.1807	0.8	0.9133	2.5	0.1072	2.3	0.94	656.4	14.5	658.8	12.0	667.3	17.6	656.4	14.5	98.4
126	21291	1.2	16.4288	1.3	0.9063	3.2	0.1080	2.9	0.92	661.0	18.2	655.1	15.3	634.6	27.1	661.0	18.2	104.2
373	44298	6.3	15.7775	0.7	0.9440	2.3	0.1080	2.3	0.96	661.2	14.1	675.0	11.6	721.0	14.3	661.2	14.1	91.7
2746	372458	39.1	16.2336	0.6	0.9195	1.9	0.1083	1.8	0.95	662.6	11.5	662.1	9.3	660.2	12.9	662.6	11.5	100.4
253	64162	2.0	16.3035	0.8	0.9161	2.6	0.1083	2.5	0.95	663.0	15.5	660.3	12.6	651.1	17.8	663.0	15.5	101.8
279	27436	2.0	16.1979	1.0	0.9223	2.5	0.1083	2.3	0.92	663.2	14.6	663.6	12.3	665.0	21.1	663.2	14.6	99.7
421	274440	13.5	15.4030	1.0	0.9701	2.7	0.1084	2.5	0.94	663.3	16.0	688.5	13.6	771.8	20.1	663.3	16.0	85.9
130	8795	2.1	15.4076	1.2	0.9764	3.4	0.1091	3.2	0.94	667.6	20.1	691.8	16.9	771.2	24.5	667.6	20.1	86.6
182	18719	3.1	16.2996	0.8	0.9277	3.0	0.1097	2.9	0.96	670.8	18.6	666.4	14.8	651.6	17.2	670.8	18.6	103.0
377	62511	2.2	16.1883	1.0	0.9342	2.8	0.1097	2.7	0.94	670.9	16.9	669.9	13.9	666.3	21.0	670.9	16.9	100.7
328	316351	2.9	16.0630	0.8	0.9473	2.6	0.1104	2.5	0.95	674.9	15.9	676.7	12.8	682.9	16.7	674.9	15.9	98.8
210	290372	1.7	16.0210	1.0	0.9608	2.9	0.1116	2.8	0.94	682.3	17.9	683.7	14.6	688.5	21.6	682.3	17.9	99.1
201	17909	1.4	15.7054	0.8	1.0000	2.2	0.1139	2.1	0.93	695.4	13.5	703.8	11.3	730.8	17.7	695.4	13.5	95.2
368	15811	2.4	15.6193	0.6	1.0059	1.6	0.1139	1.4	0.92	695.6	9.5	706.8	8.0	742.4	13.2	695.6	9.5	93.7
123	25134	1.8	15.7028	1.0	1.0133	2.8	0.1154	2.6	0.94	704.1	17.5	710.6	14.3	731.1	20.3	704.1	17.5	96.3
484	21971	3.2	15.2506	0.7	1.0678	2.0	0.1181	1.8	0.93	719.7	12.5	737.7	10.4	792.7	15.7	719.7	12.5	90.8
297	8484	2.0	14.5162	1.5	1.1615	3.1	0.1223	2.7	0.87	743.7	18.8	782.7	16.8	895.4	31.3	743.7	18.8	83.1
447	245915	45.2	15.1686	1.1	1.1141	3.2	0.1226	3.1	0.94	745.3	21.5	760.2	17.3	804.0	22.3	745.3	21.5	92.7
834	15228	9.0	14.7412	1.2	1.1487	2.7	0.1228	2.4	0.89	746.7	17.2	776.6	14.8	863.6	25.4	746.7	17.2	86.5
171	84400	1.1	14.9747	0.6	1.1727	3.1	0.1274	3.0	0.98	772.8	21.9	787.9	16.9	830.9	13.4	772.8	21.9	93.0
218	29738	3.3	14.1357	1.0	1.2651	2.6	0.1297	2.4	0.92	786.1	17.5	830.2	14.6	950.0	21.0	786.1	17.5	82.8
378	16114	7.0	14.4879	0.7	1.2356	2.1	0.1298	1.9	0.94	786.9	14.4	816.9	11.6	899.4	14.5	786.9	14.4	87.5
186	54416	3.0	14.3998	0.8	1.2472	3.3	0.1303	3.2	0.97	789.3	23.6	822.1	18.5	912.0	17.2	789.3	23.6	86.6
162	82325	6.9	14.7584	1.1	1.2537	2.9	0.1342	2.6	0.92	811.7	20.1	825.1	16.2	861.1	23.7	811.7	20.1	94.3
76	62923	5.6	14.5580	1.1	1.2710	3.8	0.1342	3.6	0.96	811.8	27.6	832.8	21.4	889.5	22.3	811.8	27.6	91.3
249	76515	6.6	14.7593	1.1	1.2583	3.8	0.1347	3.7	0.96	814.6	28.1	827.2	21.6	861.0	22.2	814.6	28.1	94.6
343	62434	1.5	14.8757	0.8	1.2614	2.8	0.1361	2.7	0.96	822.5	21.2	828.5	16.1	844.7	16.0	822.5	21.2	97.4
26	13020	2.0	14.5068	1.6	1.2941	4.9	0.1362	4.6	0.95	822.9	35.5	843.1	27.9	896.7	32.7	822.9	35.5	91.8
266	51332	2.3	14.0113	1.3	1.3405	3.6	0.1362	3.3	0.93	823.3	25.7	863.5	20.7	968.1	25.9	823.3	25.7	85.0
74	40285	1.1	14.6190	0.9	1.2882	3.6	0.1366	3.5	0.97	825.3	27.1	840.5	20.7	880.8	19.0	825.3	27.1	93.7
598	320348	12.8	14.2403	1.0	1.3722	2.6	0.1417	2.4	0.92	854.4	19.3	877.1	15.4	934.9	21.2	854.4	19.3	91.4
30	9633	1.7	14.8438	1.6	1.3418	4.1	0.1445	3.8	0.92	869.8	30.8	864.0	23.9	849.2	33.8	869.8	30.8	102.4
185	51102	2.5	14.2734	1.0	1.4097	3.5	0.1459	3.4	0.96	878.1	27.9	893.0	21.1	930.1	20.6	930.1	20.6	94.4
240	48638	6.7	14.2699	0.9	1.4979	3.0	0.1550	2.8	0.95	929.1	24.4	929.5	18.0	930.6	18.4	930.6	18.4	99.8
68	15386	3.3	14.1640	1.0	1.4167	3.8	0.1455	3.7	0.96	875.9	30.3	896.0	22.9	945.9	21.2	945.9	21.2	92.6
286	38879	1.5	14.1435	0.7	1.4914	2.4	0.1530	2.3	0.96	917.7	20.0	926.9	14.9	948.9	14.8	948.9	14.8	96.7
272	89370	1.2	14.0791	0.9	1.5910	2.6	0.1625	2.4	0.94	970.4	21.9	966.7	16.1	958.2	18.2	958.2	18.2	101.3
195	122859	8.1	13.9952	0.8	1.5608	3.0	0.1584	2.9	0.96	948.0	25.6	954.8	18.7	970.4	17.0	970.4	17.0	97.7
116	55622	2.4	13.9635	1.0	1.5263	2.8	0.1546	2.7	0.94	926.5	23.0	941.0	17.4	975.0	19.7	975.0	19.7	95.0
433	85980	6.7	13.9406	0.6	1.5582	2.2	0.1575	2.1	0.96	943.1	18.6	953.8	13.6	978.4	12.4	978.4	12.4	96.4
520	326602	4.6	13.9406	0.8	1.5926	2.2	0.1610	2.1	0.94	962.4	18.9	967.3	14.0	978.4	15.7	978.4	15.7	98.4
162	68669	1.6	13.8833	0.9	1.3936	2.6	0.1403	2.4	0.93	846.5	18.9	886.2	15.1	986.8	19.1	986.8	19.1	85.8
295	170909	2.6	13.8807	0.9	1.5169	3.2	0.1527	3.1	0.96	916.2	26.2	937.2	19.5	987.2	17.8	987.2	17.8	92.8
445	2123943	1.8	13.8670	0.6	1.4163	1.9	0.1424	1.8	0.95	858.5	14.6	895.8	11.3	989.1	11.8	989.1	11.8	86.8
275	129172	5.0	13.8534	0.9	1.5252	2.3	0.1532	2.1	0.93	919.1	18.2	940.6	14.1	991.2	17.6	991.2	17.6	92.7
102	21361	3.1	13.8499	1.0	1.6797	3.4	0.1687	3.2	0.95	1005.1	30.0	1000.9	21.5	991.7	20.7	991.7	20.7	101.4
74	17098	4.3	13.8139	1.2	1.6974	2.9	0.1701	2.7	0.92	1012.5	25.0	1007.6	18.6	997.0	23.7	997.0	23.7	101.6
254	64938	4.9	13.8070	0.8	1.6497	3.0	0.1652	2.9	0.97	985.6	26.1	989.4	18.7	997.9	15.3	997.9	15.3	98.8
467	342388	4.5	13.7763	0.8	1.7033	3.0	0.1702	2.9	0.97	1013.1	26.9	1009.8	19.0	1002.5	15.3	1002.5	15.3	101.1
310	17297	3.0	13.7650	0.9	1.5053	2.3	0.1503	2.2	0.92	902.5	18.3	932.5	14.3	1004.1	18.1	1004.1	18.1	89.9
218	54452	4.5	13.7542	0.7	1.5342	2.5	0.1530	2.4	0.96	918.0	20.5	944.2	15.4	1005.7	15.1	1005.7	15.1	91.3
244	56771	2.4	13.7317	0.9	1.7615	2.8	0.1754	2.6	0.95	1042.0	25.5	1031.4	18.1	1009.1	18.5	1009.1	18.5	103.3
109	331618	1.8	13.7244	0.9	1.6260	3.4	0.1618	3.3	0.96	967.0	29.8	980.3	21.7	1010.1	18.8	1010.1	18.8	95.7
289	136678	2.9	13.7026	0.7	1.7446	3.1	0.1734	3.0	0.97	1030.7	28.5	1025.2	19.9	1013.3	15.0	1013.3	15.0	101.7
367	1862439	1.6	13.6764	0.7	1.6890	2.6	0.1675	2.5	0.96	998.5	23.0	1004.4	16.6	1017.2	15.1	1017.2	15.1	98.2
150	41206	2.1	13.6733	0.9	1.5981	2.7	0.1585	2.6	0.94	948.3	22.8	969.5	17.1	1017.7	18.2	1017.7	18.2	93.2
260	59318	2.6	13.6698	0.6	1.7045	2.7	0.1690	2.6	0.97	1006.5	24.5	1010.2	17.3	1018.2	12.4	1018.2	12.4	98.9
466	125762	3.1	13.6501	0.9	1.7619	2.3	0.1744	2.1	0.92	1036.5	20.6	1031.6	15.2	1021.1	18.8	1021.1	18.8	101.5
293	56938	2.1	13.6454	0.7	1.7342	2.4	0.1716	2.3	0.95	1021.1	21.9	1021.3	15.7	1021.8	14.7	1021.8	14.7	99.9
111	22063	2.0	13.6403	1.3	1.5446	3.8	0.1528	3.6	0.94	916.7	30.8	948.3	23.7	1022.6	27.2	1022.6	27.2	89.6
226	70961	3.3	13.6299	0.6	1.7119	2.8	0.1692	2.7	0.97	1007.9	25.3	1013.0	17.9	1024.1	12.9	1024.1	12.9	98.4
295	63211	3.6	13.6277	0.6	1.7327	2.6	0.1713	2.5	0.97	1019.0	23.7	1020.8	16.7	1024.4	12.6	1024.4	12.6	99.5
254	172218	3.0	13.6073	0.8	1.7032	2.9	0.1681	2.8	0.96	1001.6	26.2	1009.7	18.8	1027.5	16.9	1027.5	16.9	97.5
178	22427	3.0	13.5729	0.8	1.6652	2.2	0.1639	2.1	0.93	978.5	18.9	995.4	14.2	1032.6	17.0	1032.6	17.0	94.8
481	114323	20.4	13.5700	0.8	1.7412	2.5	0.1714	2.4	0.95	1019.6	22.5	1023.9	16.1	1033.0	15.3	1033.0	15.3	98.7
438	243101	16.8	13.5638	0.6	1.8242	2.4	0.1795	2.3	0.97	1064.0	22.4	1054.2	15.5	1033.9	12.3	1033.9	12.3	102.9
331	28573	11.4	13.5563	0.6	1.6993	2.1	0.1671	2.0	0.95	996.0	18.0	1008.3	13.1	1035.1	12.6	1035.1	12.6	96.2
144	146229	1.9	13.5536	1.1	1.7291	3.0	0.1700	2.7	0.92	1012.0	25.5	1019.4	19.0	1035.5	23.0	1035.5	23.0	97.7

356	47335	2.3	13.5177	0.9	1.7021	2.4	0.1669	2.3	0.93	994.9	20.8	1009.3	15.5	1040.8	17.6	1040.8	17.6	95.6
318	310670	7.0	13.5171	0.7	1.7292	2.4	0.1695	2.3	0.96	1009.5	21.3	1019.5	15.3	1040.9	14.1	1040.9	14.1	97.0
92	28502	1.9	13.5148	1.0	1.8042	3.4	0.1768	3.2	0.96	1049.7	31.1	1047.0	21.9	1041.3	19.6	1041.3	19.6	100.8
358	282690	1.2	13.5135	0.9	1.7145	2.2	0.1680	2.0	0.92	1001.3	18.6	1014.0	14.0	1041.5	17.3	1041.5	17.3	96.1
361	93524	15.5	13.4669	0.8	1.8142	2.4	0.1772	2.2	0.94	1051.6	21.8	1050.6	15.6	1048.5	16.5	1048.5	16.5	100.3
215	48575	1.7	13.4628	0.8	1.6239	2.3	0.1586	2.1	0.94	948.8	18.9	979.5	14.4	1049.1	16.2	1049.1	16.2	90.4
193	51763	2.7	13.4454	0.8	1.6879	3.0	0.1646	2.9	0.96	982.2	26.7	1004.0	19.4	1051.7	16.3	1051.7	16.3	93.4
431	9044319	7.7	13.4452	0.9	1.7520	2.8	0.1708	2.7	0.95	1016.8	25.2	1027.9	18.2	1051.7	17.2	1051.7	17.2	96.7
192	434769	2.5	13.4398	0.7	1.7896	3.3	0.1744	3.2	0.98	1036.5	30.5	1041.7	21.2	1052.5	13.8	1052.5	13.8	98.5
85	32243	2.0	13.3984	1.0	1.5075	2.9	0.1465	2.7	0.94	881.3	22.4	933.4	17.6	1058.7	19.2	1058.7	19.2	83.2
353	75383	1.1	13.3658	0.8	1.7682	2.4	0.1714	2.3	0.94	1019.9	21.8	1033.9	15.9	1063.6	16.5	1063.6	16.5	95.9
133	41350	4.2	13.3581	1.0	1.9370	2.4	0.1877	2.1	0.91	1108.7	21.7	1093.9	15.8	1064.8	19.9	1064.8	19.9	104.1
370	199069	3.6	13.3558	0.9	1.7953	2.1	0.1739	1.9	0.91	1033.6	18.1	1043.8	13.6	1065.1	17.5	1065.1	17.5	97.0
313	80949	5.8	13.3555	0.8	1.8564	1.9	0.1798	1.8	0.92	1066.0	17.6	1065.7	12.8	1065.2	15.2	1065.2	15.2	100.1
166	17316	1.8	13.3438	0.8	1.6360	2.8	0.1583	2.7	0.96	947.5	24.1	984.2	17.9	1066.9	15.8	1066.9	15.8	88.8
255	66877	1.7	13.3285	0.4	1.9078	1.9	0.1844	1.8	0.98	1091.1	18.5	1083.8	12.6	1069.2	7.7	1069.2	7.7	102.0
238	34997	1.7	13.3234	0.7	1.8293	2.7	0.1768	2.6	0.97	1049.3	24.9	1056.0	17.5	1070.0	13.8	1070.0	13.8	98.1
69	14492	1.2	13.3026	1.1	1.9155	3.4	0.1848	3.2	0.94	1093.2	32.3	1086.5	22.7	1073.2	22.9	1073.2	22.9	101.9
93	30917	1.9	13.2985	1.1	1.8611	4.0	0.1795	3.9	0.96	1064.2	38.3	1067.4	26.7	1073.8	21.5	1073.8	21.5	99.1
314	4655087	2.1	13.2888	0.7	1.8515	2.4	0.1784	2.3	0.95	1058.5	22.1	1064.0	15.7	1075.2	14.4	1075.2	14.4	98.4
400	137224	2.7	13.2790	0.7	1.9254	2.2	0.1854	2.1	0.95	1096.6	21.5	1090.0	15.0	1076.7	14.1	1076.7	14.1	101.8
159	54496	3.1	13.2633	0.8	1.9580	2.9	0.1883	2.8	0.96	1112.4	28.1	1101.2	19.3	1079.1	16.7	1079.1	16.7	103.1
167	46930	2.8	13.2518	0.8	1.8341	2.8	0.1763	2.7	0.96	1046.6	25.9	1057.7	18.4	1080.8	16.4	1080.8	16.4	96.8
120	79160	2.0	13.2296	1.0	1.8022	3.1	0.1729	2.9	0.95	1028.2	27.9	1046.2	20.2	1084.2	20.2	1084.2	20.2	94.8
366	49883	3.5	13.2233	0.8	1.8885	2.0	0.1811	1.8	0.91	1073.1	17.9	1077.1	13.3	1085.2	16.7	1085.2	16.7	98.9
391	650781	2.4	13.2231	0.6	1.8881	2.4	0.1811	2.3	0.97	1072.8	23.1	1076.9	16.0	1085.2	11.5	1085.2	11.5	98.9
135	120080	3.0	13.1967	0.8	1.7816	2.2	0.1705	2.1	0.93	1015.0	19.5	1038.8	14.6	1089.2	16.7	1089.2	16.7	93.2
187	111517	1.7	13.1691	0.9	1.9350	3.1	0.1848	3.0	0.96	1093.2	29.8	1093.3	20.7	1093.4	17.8	1093.4	17.8	100.0
179	287267	1.4	13.1683	0.7	1.9027	3.3	0.1817	3.2	0.98	1076.4	31.8	1082.0	21.8	1093.5	13.1	1093.5	13.1	98.4
512	71269	2.4	13.1606	0.7	1.9118	2.5	0.1825	2.4	0.95	1080.5	23.5	1085.2	16.5	1094.7	14.9	1094.7	14.9	98.7
327	69414	5.1	13.1440	0.6	1.9355	2.2	0.1845	2.1	0.96	1091.6	21.4	1093.4	14.9	1097.2	12.6	1097.2	12.6	99.5
73	673584	2.0	13.1222	1.3	1.8587	3.8	0.1769	3.6	0.94	1050.0	34.7	1066.5	25.1	1100.5	25.7	1100.5	25.7	95.4
90	28311	3.3	13.0996	0.9	1.9134	2.5	0.1818	2.4	0.94	1076.7	23.6	1085.8	16.9	1104.0	17.3	1104.0	17.3	97.5
336	60342	3.4	13.0786	0.7	1.9003	2.5	0.1803	2.4	0.95	1068.4	23.4	1081.2	16.5	1107.2	14.8	1107.2	14.8	96.5
249	166603	7.0	13.0601	1.0	1.9950	2.8	0.1890	2.7	0.94	1115.8	27.4	1113.8	19.2	1110.0	19.2	1110.0	19.2	100.5
323	499876	2.0	13.0100	0.7	1.9971	2.4	0.1884	2.3	0.96	1112.9	23.9	1114.5	16.4	1117.7	13.1	1117.7	13.1	99.6
527	34399	2.2	12.9950	0.5	1.9925	1.8	0.1878	1.8	0.96	1109.4	17.9	1113.0	12.4	1120.0	10.8	1120.0	10.8	99.1
424	261682	2.6	12.9931	0.7	2.0508	2.4	0.1933	2.3	0.96	1139.0	24.3	1132.6	16.6	1120.3	13.8	1120.3	13.8	101.7
122	62917	1.5	12.9885	1.1	1.8801	2.9	0.1771	2.7	0.92	1051.2	25.9	1074.1	19.2	1121.0	22.5	1121.0	22.5	93.8
439	64503	1.7	12.9764	0.8	2.0276	2.2	0.1908	2.0	0.94	1125.9	20.8	1124.8	14.6	1122.8	15.1	1122.8	15.1	100.3
647	29883	2.8	12.9548	0.7	1.8741	2.3	0.1761	2.2	0.95	1045.6	21.0	1072.0	15.2	1126.2	14.0	1126.2	14.0	92.8
34	118566	1.9	12.8298	0.9	1.9710	5.3	0.1834	5.2	0.99	1085.5	52.1	1105.7	35.7	1145.5	17.9	1145.5	17.9	94.8
308	21075	2.7	12.7837	0.8	2.0866	2.3	0.1935	2.2	0.94	1140.1	23.0	1144.4	16.0	1152.6	15.3	1152.6	15.3	98.9
63	50440	1.8	12.6943	0.9	1.9114	3.3	0.1760	3.1	0.96	1045.0	30.0	1085.1	21.7	1166.5	18.7	1166.5	18.7	89.6
447	171397	3.5	12.6374	1.0	2.1294	2.9	0.1952	2.7	0.94	1149.3	28.8	1158.4	20.1	1175.4	20.1	1175.4	20.1	97.8
240	21410	1.4	12.5151	0.9	2.1125	2.4	0.1917	2.2	0.93	1130.8	22.6	1152.9	16.2	1194.6	17.6	1194.6	17.6	94.7
258	11847	5.3	12.4855	1.5	1.9851	3.2	0.1798	2.8	0.88	1065.6	27.4	1110.5	21.5	1199.3	30.3	1199.3	30.3	88.9
160	12089	1.1	12.3756	0.9	2.1715	3.0	0.1949	2.8	0.95	1147.9	29.7	1171.9	20.6	1216.7	17.8	1216.7	17.8	94.3
146	45653	2.0	12.3257	0.9	2.0615	3.0	0.1843	2.9	0.95	1090.4	28.9	1136.1	20.7	1224.6	17.8	1224.6	17.8	89.0
36	12779	0.5	11.4666	0.9	2.8254	3.5	0.2350	3.4	0.97	1360.5	41.9	1362.3	26.5	1365.1	17.2	1365.1	17.2	99.7
92	22058	1.0	11.3345	0.9	2.8606	3.3	0.2352	3.1	0.96	1361.5	38.4	1371.6	24.5	1387.4	17.5	1387.4	17.5	98.1
44	11140	2.0	11.2339	1.0	3.0193	4.7	0.2460	4.6	0.98	1417.8	59.0	1412.5	36.1	1404.5	18.3	1404.5	18.3	100.9
76	20467	1.1	11.1867	1.1	2.8773	4.0	0.2334	3.9	0.96	1352.5	47.5	1376.0	30.5	1412.6	21.0	1412.6	21.0	95.8
217	147087	2.1	11.1703	0.7	3.0524	2.6	0.2473	2.5	0.96	1424.5	31.5	1420.8	19.6	1415.4	13.1	1415.4	13.1	100.6
79	77113	1.1	11.0333	0.9	3.1290	3.2	0.2504	3.0	0.96	1440.5	38.9	1439.8	24.3	1438.9	17.7	1438.9	17.7	100.1
409	11410370	2.0	10.9957	0.5	3.0632	2.4	0.2443	2.4	0.98	1409.0	30.0	1423.5	18.5	1445.4	9.4	1445.4	9.4	97.5
254	950141	1.1	10.9836	0.8	3.0967	3.4	0.2467	3.3	0.97	1421.3	41.7	1431.9	25.8	1447.5	14.6	1447.5	14.6	98.2
269	29857	1.8	10.9219	0.6	3.0768	2.4	0.2437	2.3	0.96	1406.0	29.2	1426.9	18.4	1458.2	12.3	1458.2	12.3	96.4
371	167622	1.2	10.2483	0.8	3.7044	2.7	0.2753	2.5	0.95	1567.9	35.3	1572.3	21.3	1578.3	15.1	1578.3	15.1	99.3
85	14682	1.6	10.1155	0.6	3.8559	2.3	0.2829	2.3	0.97	1605.9	32.4	1604.5	18.9	1602.7	10.4	1602.7	10.4	100.2
153	41601	1.6	10.0278	1.0	3.7401	2.7	0.2720	2.6	0.93	1551.0	35.2	1580.0	22.0	1618.9	18.6	1618.9	18.6	95.8
225	24931	1.5	9.9773	0.7	4.0524	2.7	0.2932	2.6	0.96	1657.7	38.0	1644.8	22.0	1628.3	13.8	1628.3	13.8	101.8
201	726788	1.9	9.7591	0.8	4.3961	2.8	0.3112	2.7	0.96	1746.4	41.6	1711.6	23.5	1669.3	14.9	1669.3	14.9	104.6
477	89623	5.4	9.7398	3.5	3.5058	4.6	0.2476	3.0	0.64	1426.3	38.1	1528.5	36.5	1672.9	65.4	1672.9	65.4	85.3
229	89253	2.1	9.7128	0.7	4.0744	2.0	0.2870	1.9	0.94	1626.6	27.6	1649.2	16.6	1678.1	12.3	1678.1	12.3	96.9
357	87911	2.9	9.6233	0.6	4.3553	2.6	0.3040	2.5	0.97	1711.0	37.3	1703.9	21.1	1695.2	11.4	1695.2	11.4	100.9
400	84379902	1.5	8.7988	0.7	4.7816	2.4	0.3051	2.3	0.96	1716.8	34.4	1781.7	20.0	1858.6	12.4	1858.6	12.4	92.4
145	31871	0.8	8.7912	0.7	5.1456	2.5	0.3281	2.4	0.96	1829.1	37.5	1843.7	20.9	1860.2	13.1	1860.2	13.1	98.3
526	419569	45.0	8.4066	0.7	5.5767	2.2	0.3400	2.1	0.95	1886.8	33.8	1912.5	18.8	1940.6	12.6	1940.6	12.6	97.2
263	40520	2.1	5.2235	0.4	13.4859	1.7	0.5109	1.7	0.98	2660.5	37.1	2714.3	16.5	2754.6	6.3	2754.6	6.3	96.6
182	527424	4.7	4.9670	0.7	11.9818	2.5	0.4316	2.4	0.96	2313.1	47.3	2603.0	23.7	2837.0	11.4	2837.0	11.4	81.5
146	97042	2.0	4.8370	0.7	16.1348	2.6	0.5660	2.5	0.97	2891.5	59.3	2884.8	25.2	2880.1	10.8	2880.1	10.8	100.4

MOU2

					Isotope ratios							Apparent ages (Ma)						
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
252	47837	1.6	17.5063	1.1	0.6046	3.2	0.0768	3.0	0.94	476.8	13.6	480.1	12.1	496.2	24.3	476.8	13.6	96.1
302	75042	1.2	17.2015	0.9	0.6213	2.8	0.0775	2.7	0.95	481.3	12.5	490.7	11.0	534.8	19.9	481.3	12.5	90.0
266	28917	1.0	17.6060	0.8	0.6081	2.6	0.0776	2.5	0.95	482.1	11.5	482.3	10.0	483.8	17.8	482.1	11.5	99.6
116	43310	0.7	17.2164	1.0	0.6237	3.1	0.0779	3.0	0.95	483.5	13.9	492.2	12.3	533.0	22.2	483.5	13.9	90.7
319	33080	1.9	17.3866	1.0	0.6224	2.6	0.0785	2.4	0.92	487.1	11.2	491.4	10.1	511.4	22.5	487.1	11.2	95.3
669	210196	2.5	17.3043	0.9	0.6292	2.5	0.0790	2.4	0.94	489.9	11.2	495.6	9.9	521.8	19.1	489.9	11.2	93.9
361	117975	1.8	17.5912	1.0	0.6213	2.6	0.0793	2.4	0.93	491.8	11.4	490.7	10.1	485.6	21.2	491.8	11.4	101.3
1191	110793	2.9	17.5391	0.8	0.6236	2.3	0.0793	2.2	0.93	492.1	10.4	492.1	9.2	492.1	18.5	492.1	10.4	100.0
159	24219	1.0	17.1728	1.4	0.6369	2.7	0.0793	2.3	0.85	492.1	10.8	500.4	10.6	538.5	30.6	492.1	10.8	91.4
386	94878	2.2	17.6395	0.8	0.6211	2.4	0.0795	2.3	0.94	492.9	10.7	490.6	9.3	479.5	18.6	492.9	10.7	102.8
239	380947	2.1	17.1694	1.0	0.6388	2.6	0.0795	2.4	0.92	493.4	11.5	501.6	10.4	538.9	22.6	493.4	11.5	91.6
278	25775	1.3	17.5527	0.8	0.6252	2.9	0.0796	2.8	0.96	493.7	13.2	493.1	11.3	490.4	18.6	493.7	13.2	100.7
199	30915	1.4	17.3342	1.0	0.6338	3.5	0.0797	3.4	0.95	494.2	16.1	498.5	13.9	518.0	23.0	494.2	16.1	95.4
577	243547	2.7	17.5124	0.8	0.6283	2.3	0.0798	2.1	0.93	495.0	10.0	495.1	8.8	495.5	17.9	495.0	10.0	99.9
216	42752	2.0	17.4083	1.1	0.6323	2.9	0.0798	2.7	0.93	495.1	12.8	497.5	11.4	508.6	23.3	495.1	12.8	97.3
198	43538	1.8	17.3302	0.9	0.6355	2.3	0.0799	2.1	0.91	495.4	10.2	499.5	9.2	518.5	20.8	495.4	10.2	95.5
217	57838	1.4	17.0331	1.1	0.6478	3.3	0.0800	3.1	0.95	496.3	14.8	507.1	13.1	556.3	23.3	496.3	14.8	89.2
984	3133203	2.4	17.6190	0.6	0.6263	2.4	0.0800	2.3	0.96	496.3	11.0	493.8	9.3	482.1	14.3	496.3	11.0	102.9
522	207572	1.5	17.3830	0.7	0.6356	2.4	0.0801	2.3	0.96	496.9	11.1	499.6	9.6	511.8	15.6	496.9	11.1	97.1
337	169085	2.2	17.4314	1.0	0.6339	2.7	0.0801	2.6	0.93	497.0	12.3	498.6	10.8	505.7	21.5	497.0	12.3	98.3
295	53849	3.1	17.2762	0.9	0.6407	2.4	0.0803	2.3	0.92	497.8	10.8	502.7	9.7	525.3	20.3	497.8	10.8	94.8
444	68005	2.2	17.4713	0.9	0.6343	2.5	0.0804	2.3	0.94	498.4	11.1	498.8	9.8	500.7	19.1	498.4	11.1	99.5
257	41724	2.8	17.2779	0.9	0.6414	2.9	0.0804	2.7	0.95	498.4	13.1	503.2	11.4	525.1	18.7	498.4	13.1	94.9
239	89544	1.7	17.4343	0.9	0.6363	3.2	0.0805	3.1	0.96	498.9	14.9	500.0	12.7	505.3	19.4	498.9	14.9	98.7
260	339453	1.1	17.1940	0.9	0.6453	2.7	0.0805	2.5	0.94	498.9	12.2	505.6	10.8	535.8	20.3	498.9	12.2	93.1
269	32556	1.3	17.3757	1.0	0.6398	2.8	0.0806	2.6	0.93	499.9	12.6	502.2	11.2	512.8	22.8	499.9	12.6	97.5
241	79754	1.9	17.0810	0.9	0.6522	2.8	0.0808	2.6	0.94	500.9	12.6	509.8	11.1	550.2	20.1	500.9	12.6	91.0
1143	366680	2.6	17.4734	0.8	0.6385	2.4	0.0809	2.3	0.95	501.6	11.0	501.4	9.5	500.4	16.8	501.6	11.0	100.2
166	48372	2.0	17.2363	1.3	0.6481	3.1	0.0810	2.8	0.90	502.2	13.3	507.3	12.2	530.4	28.9	502.2	13.3	94.7
295	111349	1.4	17.0145	0.9	0.6568	3.3	0.0811	3.1	0.96	502.4	15.2	512.7	13.2	558.7	20.5	502.4	15.2	89.9
303	924878	1.1	17.2308	1.0	0.6527	2.6	0.0816	2.4	0.92	505.4	11.8	510.1	10.6	531.1	22.5	505.4	11.8	95.2
265	23934	1.7	17.5742	0.9	0.6417	3.3	0.0818	3.2	0.96	506.8	15.6	503.4	13.1	487.7	19.3	506.8	15.6	103.9
416	53451	2.8	17.3368	0.7	0.6510	2.4	0.0819	2.3	0.96	507.2	11.3	509.1	9.7	517.6	14.9	507.2	11.3	98.0
75	15962	2.3	17.0326	1.6	0.6652	3.5	0.0822	3.1	0.89	509.1	15.2	517.8	14.3	556.4	35.6	509.1	15.2	91.5
131	18912	2.1	17.1714	1.3	0.6601	3.5	0.0822	3.3	0.93	509.3	16.1	514.7	14.2	538.6	28.1	509.3	16.1	94.6
307	22056	1.8	17.5022	0.9	0.6480	2.6	0.0823	2.5	0.95	509.6	12.1	507.3	10.5	496.8	18.8	509.6	12.1	102.6
225	89377	4.6	17.2369	1.0	0.6585	3.1	0.0823	2.9	0.95	510.0	14.4	513.7	12.5	530.4	21.4	510.0	14.4	96.2
65	8127	2.4	17.5657	1.7	0.6478	4.2	0.0825	3.8	0.91	511.2	18.8	507.1	16.8	488.8	38.6	511.2	18.8	104.6
148	44230	1.7	17.2393	1.0	0.6605	2.7	0.0826	2.5	0.93	511.6	12.5	514.9	11.1	530.0	22.7	511.6	12.5	96.5
553	324327	2.2	17.2995	0.9	0.6586	2.7	0.0826	2.5	0.94	511.9	12.4	513.8	10.8	522.4	19.7	511.9	12.4	98.0
159	23256	2.1	17.4486	1.0	0.6554	3.7	0.0829	3.5	0.96	513.7	17.4	511.8	14.7	503.5	21.9	513.7	17.4	102.0
243	24743	2.1	17.5402	0.9	0.6523	2.7	0.0830	2.5	0.94	513.9	12.6	509.9	10.8	492.0	19.5	513.9	12.6	104.4
248	454184	1.9	17.3141	0.8	0.6617	2.7	0.0831	2.6	0.95	514.6	12.9	515.7	11.1	520.5	18.0	514.6	12.9	98.9
173	97208	2.7	16.9093	1.1	0.6778	3.5	0.0831	3.3	0.95	514.8	16.4	525.5	14.3	572.2	22.9	514.8	16.4	90.0
138	34901	3.3	17.2090	1.0	0.6666	3.5	0.0832	3.4	0.96	515.2	16.8	518.7	14.4	533.9	22.2	515.2	16.8	96.5
189	10986	4.6	17.3941	1.1	0.6596	3.9	0.0832	3.7	0.96	515.3	18.5	514.4	15.7	510.4	23.3	515.3	18.5	101.0
88	19253	2.0	17.4611	1.5	0.6578	4.0	0.0833	3.7	0.92	515.8	18.2	513.2	16.0	502.0	33.4	515.8	18.2	102.7
156	22046	2.0	17.4807	1.0	0.6580	3.4	0.0834	3.2	0.96	516.5	16.0	513.4	13.6	499.5	21.8	516.5	16.0	103.4
355	158797	1.8	17.1695	0.8	0.6708	2.2	0.0835	2.0	0.93	517.1	10.0	521.2	8.9	538.9	17.8	517.1	10.0	96.0
199	19346	3.9	17.4195	0.9	0.6626	2.6	0.0837	2.4	0.93	518.3	12.2	516.2	10.6	507.2	20.7	518.3	12.2	102.2
118	321568	1.8	16.9848	1.4	0.6810	3.5	0.0839	3.2	0.91	519.3	16.0	527.4	14.4	562.5	30.8	519.3	16.0	92.3
571	34533	3.7	17.4711	0.8	0.6650	2.8	0.0843	2.6	0.96	521.5	13.2	517.7	11.2	500.7	18.0	521.5	13.2	104.2
178	78501	2.1	17.1193	1.2	0.6787	3.1	0.0843	2.8	0.92	521.6	14.3	526.0	12.7	545.3	26.8	521.6	14.3	95.6
239	37771	1.1	17.1388	1.0	0.6799	3.0	0.0845	2.8	0.95	523.0	14.1	526.7	12.2	542.8	21.3	523.0	14.1	96.4
508	22136	7.4	17.4499	1.0	0.6688	2.7	0.0846	2.5	0.93	523.8	12.7	520.0	11.0	503.4	21.2	523.8	12.7	104.1
237	52491	1.8	17.1293	0.8	0.6825	2.3	0.0848	2.2	0.93	524.6	11.0	528.3	9.6	544.0	18.2	524.6	11.0	96.4
116	9617	1.8	17.3919	1.5	0.6734	3.1	0.0849	2.8	0.88	525.5	13.9	522.8	12.8	510.7	33.2	525.5	13.9	102.9
270	84547	2.0	17.1448	1.0	0.6835	2.8	0.0850	2.6	0.93	525.8	13.1	528.9	11.4	542.0	21.8	525.8	13.1	97.0
155	29026	2.8	17.3895	0.9	0.6743	2.9	0.0850	2.7	0.94	526.2	13.6	523.3	11.7	511.0	20.5	526.2	13.6	103.0
154	86687	1.9	16.9088	1.0	0.6952	3.4	0.0853	3.2	0.95	527.4	16.4	535.9	14.1	572.3	22.2	527.4	16.4	92.2
122	53891	2.4	17.1192	1.1	0.6878	3.0	0.0854	2.8	0.93	528.2	14.0	531.4	12.3	545.3	24.2	528.2	14.0	96.9
119	20677	2.3	17.2309	0.9	0.6843	3.1	0.0855	3.0	0.95	528.9	15.1	529.3	12.9	531.1	20.7	528.9	15.1	99.6
153	47524	1.3	17.0908	0.9	0.6910	3.4	0.0857	3.3	0.97	529.8	16.8	533.4	14.2	549.0	19.3	529.8	16.8	96.5
272	61347	2.3	16.9882	0.9	0.7004	2.4	0.0863	2.2	0.93	533.6	11.4	539.0	10.0	562.1	19.0	533.6	11.4	94.9
308	56426	3.4	17.3809	0.9	0.6846	2.4	0.0863	2.3	0.94	533.6	11.6	529.6	10.0	512.1	18.9	533.6	11.6	104.2
514	71505	5.5	17.2035	0.8	0.6924	2.4	0.0864	2.2	0.95	534.2	11.4	534.2	9.8	534.6	16.8	534.2	11.4	99.9

169	110826	2.0	17.1194	1.1	0.6959	2.6	0.0864	2.4	0.92	534.2	12.4	536.3	11.0	545.3	23.3	534.2	12.4	98.0
61	15300	1.5	17.2879	1.3	0.6891	3.6	0.0864	3.4	0.93	534.2	17.2	532.3	15.0	523.8	28.8	534.2	17.2	102.0
66	7855	2.1	17.2407	2.0	0.6911	4.2	0.0864	3.7	0.88	534.3	19.1	533.5	17.6	529.9	44.5	534.3	19.1	100.8
78	58239	2.1	16.7678	1.2	0.7116	2.7	0.0865	2.4	0.89	535.0	12.1	545.7	11.2	590.5	26.4	535.0	12.1	90.6
457	139462	11.1	17.0460	0.6	0.7011	1.9	0.0867	1.8	0.94	535.9	9.2	539.5	7.9	554.7	14.1	535.9	9.2	96.6
138	35435	2.0	17.2426	1.2	0.6933	3.2	0.0867	3.0	0.93	536.0	15.6	534.8	13.5	529.6	25.3	536.0	15.6	101.2
542	78167	3.0	17.3309	0.8	0.6931	2.8	0.0871	2.7	0.96	538.5	14.0	534.7	11.8	518.4	17.9	538.5	14.0	103.9
247	998507	2.7	17.1024	0.9	0.7042	2.7	0.0874	2.5	0.94	539.9	13.0	541.3	11.2	547.4	19.8	539.9	13.0	98.6
453	207888	2.6	16.8913	1.0	0.7137	2.4	0.0874	2.2	0.92	540.3	11.6	546.9	10.3	574.5	20.9	540.3	11.6	94.1
173	107310	2.9	17.1783	0.9	0.7026	3.2	0.0875	3.0	0.96	541.0	15.8	540.3	13.3	537.8	20.2	541.0	15.8	100.6
500	62071	2.5	17.0094	0.9	0.7107	2.6	0.0877	2.5	0.94	541.8	12.9	545.2	11.1	559.4	19.4	541.8	12.9	96.9
333	60400	5.8	17.2174	0.8	0.7025	2.5	0.0877	2.4	0.95	542.0	12.6	540.3	10.6	532.8	16.5	542.0	12.6	101.7
260	27151	117.1	16.7519	1.0	0.7244	2.6	0.0880	2.4	0.93	543.7	12.4	553.2	10.9	592.5	21.0	543.7	12.4	91.8
55	20035	6.0	17.0129	1.6	0.7134	4.6	0.0880	4.3	0.94	543.9	22.5	546.8	19.5	558.9	35.2	543.9	22.5	97.3
153	169141	1.1	16.7105	1.2	0.7324	2.4	0.0888	2.1	0.88	548.2	11.2	558.0	10.4	597.9	25.1	548.2	11.2	91.7
156	40699	1.8	17.1860	0.9	0.7141	3.6	0.0890	3.5	0.97	549.6	18.5	547.2	15.3	536.8	19.7	549.6	18.5	102.4
257	53295	2.2	16.9678	0.9	0.7233	2.9	0.0890	2.7	0.94	549.7	14.3	552.6	12.2	564.7	20.4	549.7	14.3	97.3
191	37831	7.6	16.8294	1.2	0.7306	3.2	0.0892	3.0	0.92	550.7	15.8	556.9	13.9	582.5	26.8	550.7	15.8	94.5
85	16590	307.1	16.9809	1.3	0.7272	3.8	0.0896	3.5	0.94	553.0	18.8	554.9	16.2	563.0	29.0	553.0	18.8	98.2
195	53787	2.5	16.9797	1.0	0.7319	2.6	0.0901	2.4	0.93	556.3	12.9	557.7	11.3	563.2	21.6	556.3	12.9	98.8
104	13190	1.3	17.0563	1.3	0.7296	3.6	0.0902	3.4	0.93	557.0	18.1	556.3	15.6	553.3	28.3	557.0	18.1	100.7
211	150849	2.2	16.8338	0.9	0.7395	2.6	0.0903	2.4	0.94	557.2	13.0	562.1	11.2	582.0	19.3	557.2	13.0	95.7
230	141542	1.9	16.8456	1.2	0.7390	3.2	0.0903	3.0	0.93	557.2	15.8	561.8	13.8	580.4	26.0	557.2	15.8	96.0
409	89325	5.2	16.8755	0.7	0.7380	2.1	0.0903	2.0	0.94	557.5	10.8	561.3	9.3	576.6	16.0	557.5	10.8	96.7
510	218855	6.0	16.9174	0.9	0.7364	2.8	0.0903	2.6	0.95	557.6	14.0	560.3	11.9	571.2	18.7	557.6	14.0	97.6
215	242858	2.5	16.6297	1.0	0.7499	3.5	0.0904	3.4	0.96	558.2	18.1	568.2	15.4	608.4	21.9	558.2	18.1	91.8
25	15239	1.2	16.7487	2.0	0.7464	5.6	0.0907	5.2	0.93	559.5	27.9	566.1	24.2	592.9	43.4	559.5	27.9	94.4
410	95880	6.0	16.7832	0.8	0.7465	2.3	0.0909	2.1	0.94	560.7	11.4	566.2	9.8	588.5	17.1	560.7	11.4	95.3
292	36556	1.4	16.7873	1.1	0.7493	2.5	0.0912	2.3	0.90	562.8	12.4	567.8	11.0	588.0	23.5	562.8	12.4	95.7
73	53556	2.8	16.6264	1.3	0.7570	3.5	0.0913	3.2	0.92	563.1	17.4	572.3	15.3	608.8	29.0	563.1	17.4	92.5
351	44161	6.8	16.8033	0.8	0.7499	3.2	0.0914	3.1	0.97	563.8	16.9	568.2	14.0	585.9	16.9	563.8	16.9	96.2
421	39605	2.9	17.1151	0.9	0.7364	2.9	0.0914	2.8	0.95	563.9	15.2	560.3	12.7	545.8	19.1	563.9	15.2	103.3
171	32671	1.7	16.8886	1.0	0.7467	2.9	0.0915	2.8	0.94	564.2	14.9	566.3	12.7	574.9	21.8	564.2	14.9	98.1
282	53095	6.5	16.8451	0.9	0.7497	2.2	0.0916	2.0	0.92	565.0	11.1	568.1	9.7	580.5	18.9	565.0	11.1	97.3
241	124049	3.3	16.9635	0.8	0.7455	2.5	0.0917	2.4	0.95	565.7	13.0	565.6	11.0	565.2	17.4	565.7	13.0	100.1
59	18401	1.6	16.7784	1.5	0.7547	3.1	0.0918	2.8	0.89	566.4	15.1	571.0	13.7	589.1	31.6	566.4	15.1	96.1
159	34839	1.2	16.8533	0.9	0.7524	3.5	0.0920	3.4	0.97	567.1	18.3	569.6	15.2	579.4	19.2	567.1	18.3	97.9
366	81053	2.3	16.8518	0.9	0.7543	2.7	0.0922	2.6	0.94	568.5	14.1	570.7	12.0	579.6	20.0	568.5	14.1	98.1
172	64321	0.5	16.3729	1.0	0.7770	2.7	0.0923	2.5	0.93	569.0	13.6	583.8	11.9	642.0	20.7	569.0	13.6	88.6
139	38665	2.2	16.7157	0.9	0.7617	3.2	0.0923	3.0	0.95	569.4	16.5	575.0	13.9	597.2	20.6	569.4	16.5	95.3
54	29906	1.7	16.7088	1.8	0.7672	3.9	0.0930	3.5	0.89	573.1	19.1	578.2	17.2	598.1	38.4	573.1	19.1	95.8
640	232979	21.3	16.8400	0.8	0.7613	2.3	0.0930	2.2	0.94	573.2	12.0	574.8	10.2	581.2	17.1	573.2	12.0	98.6
324	129781	9.5	16.5035	1.0	0.7781	2.8	0.0931	2.6	0.94	574.1	14.5	584.4	12.5	624.8	20.9	574.1	14.5	91.9
571	167216	27.7	16.8008	0.8	0.7646	2.8	0.0932	2.7	0.95	574.2	14.6	576.7	12.2	586.2	18.1	574.2	14.6	98.0
446	3964563	3.2	16.7420	0.8	0.7674	2.5	0.0932	2.4	0.95	574.3	13.2	578.3	11.2	593.8	17.7	574.3	13.2	96.7
386	56906	9.7	16.9918	0.7	0.7571	2.6	0.0933	2.5	0.96	575.1	13.7	572.3	11.4	561.6	16.2	575.1	13.7	102.4
240	51037	3.4	16.9368	0.7	0.7610	2.3	0.0935	2.2	0.95	576.1	12.0	574.6	10.1	568.7	16.0	576.1	12.0	101.3
214	17405	2.0	16.8549	0.9	0.7657	2.8	0.0936	2.7	0.95	576.8	14.8	577.3	12.5	579.2	19.6	576.8	14.8	99.6
471	82880	2.2	16.7405	0.8	0.7720	2.5	0.0937	2.3	0.95	577.5	12.9	580.9	10.9	594.0	16.4	577.5	12.9	97.2
146	72305	307.0	16.6172	0.8	0.7802	2.3	0.0940	2.2	0.94	579.3	12.0	585.6	10.3	610.0	17.7	579.3	12.0	95.0
64	80666	1.9	16.2685	1.1	0.7972	3.7	0.0941	3.5	0.95	579.5	19.6	595.2	16.7	655.7	23.9	579.5	19.6	88.4
1991	12234587	28.9	16.9979	0.8	0.7655	2.3	0.0944	2.1	0.94	581.3	11.8	577.2	9.9	560.9	16.8	581.3	11.8	103.7
106	51914	2.1	16.4702	1.1	0.7906	3.1	0.0944	2.9	0.93	581.8	16.0	591.5	13.8	629.2	23.8	581.8	16.0	92.5
362	101177	4.5	16.6156	0.9	0.7905	2.8	0.0953	2.7	0.95	586.6	15.0	591.5	12.7	610.2	19.7	586.6	15.0	96.1
304	993479	5.4	16.6562	0.7	0.7893	2.6	0.0954	2.5	0.97	587.1	14.2	590.8	11.7	604.9	14.6	587.1	14.2	97.1
156	37550	1.3	16.6570	1.0	0.7905	3.3	0.0955	3.2	0.96	588.0	17.7	591.4	14.8	604.8	20.6	588.0	17.7	97.2
1140	114215	4.7	16.8840	0.8	0.7810	2.7	0.0956	2.5	0.95	588.8	14.3	586.0	11.9	575.5	18.2	588.8	14.3	102.3
1713	13193247	4.8	16.6995	0.7	0.7942	2.1	0.0962	2.0	0.94	592.1	11.3	593.6	9.6	599.3	15.8	592.1	11.3	98.8
116	416863	1.3	16.6800	1.0	0.7965	2.7	0.0964	2.6	0.94	593.0	14.5	594.9	12.3	601.8	20.6	593.0	14.5	98.5
514	85119	30.6	16.0908	0.9	0.8259	2.9	0.0964	2.8	0.95	593.2	15.7	611.4	13.4	679.2	19.3	593.2	15.7	87.3
204	25809	1.9	16.7399	1.1	0.7997	3.3	0.0971	3.1	0.94	597.3	17.5	596.7	14.7	594.1	23.4	597.3	17.5	100.6
427	29634	1.7	16.7347	0.9	0.8028	2.5	0.0974	2.3	0.93	599.4	13.4	598.4	11.4	594.8	20.5	599.4	13.4	100.8
446	1059015	0.9	16.5441	0.9	0.8124	2.8	0.0975	2.6	0.95	599.6	15.0	603.8	12.6	619.5	18.9	599.6	15.0	96.8
374	47029	0.9	16.6586	0.8	0.8076	2.2	0.0976	2.0	0.92	600.2	11.5	601.1	9.9	604.6	18.1	600.2	11.5	99.3
199	22172	1.8	15.8363	1.3	0.8509	3.1	0.0977	2.8	0.91	601.1	16.2	625.2	14.5	713.2	27.7	601.1	16.2	84.3
466	89436	6.2	16.6019	0.9	0.8129	2.6	0.0979	2.4	0.94	602.0	13.9	604.1	11.7	612.0	18.8	602.0	13.9	98.4
87	222352	2.8	16.8818	1.2	0.8003	3.6	0.0980	3.3	0.94	602.6	19.2	597.0	16.0	575.8	26.6	602.6	19.2	104.7
812	116168	19.7	16.5261	0.9	0.8194	2.5	0.0982	2.4	0.94	603.9	13.6	607.7	11.5	621.9	19.0	603.9	13.6	97.1
151	24832	2.1	16.8491	1.0	0.8104	2.5	0.0990	2.3	0.91	608.7	13.4	602.7	11.5	579.9	22.8	608.7	13.4	105.0
198	23359	2.4	16.5433	0.9	0.8262	2.9	0.0991	2.7	0.95	609.3	16.0	611.5	13.3	619.6	19.8	609.3	16.0	98.3
180	22169	2.8	16.7003	1.0	0.8199	2.6	0.0993	2.5	0.93	610.4	14.4	608.0	12.1	599.2	20.8	610.4	14.4	101.9

225	62622	3.0	16.3619	1.0	0.8541	3.3	0.1014	3.1	0.95	622.3	18.4	626.9	15.2	643.4	20.9	622.3	18.4	96.7
922	129948	0.7	16.6083	0.8	0.8439	2.5	0.1016	2.3	0.94	624.0	13.9	621.3	11.5	611.1	17.9	624.0	13.9	102.1
862	180307	113.8	16.3370	0.7	0.8605	1.9	0.1020	1.8	0.94	625.9	10.7	630.4	9.0	646.7	14.5	625.9	10.7	96.8
91	16002	2.3	16.4510	1.2	0.8601	2.9	0.1026	2.6	0.90	629.7	15.5	630.2	13.4	631.7	26.3	629.7	15.5	99.7
475	28941415	16.1	16.4138	0.7	0.8621	2.2	0.1026	2.0	0.94	629.8	12.2	631.3	10.1	636.6	15.4	629.8	12.2	98.9
146	130747	1.8	16.2312	1.0	0.8720	3.0	0.1027	2.9	0.94	629.9	17.2	636.7	14.4	660.6	21.9	629.9	17.2	95.4
473	81523	1.8	16.4904	0.6	0.8618	2.0	0.1031	1.9	0.96	632.4	11.4	631.1	9.3	626.5	12.1	632.4	11.4	100.9
150	31868	1.6	16.5024	0.9	0.8647	2.7	0.1035	2.5	0.94	634.9	15.3	632.7	12.6	625.0	19.4	634.9	15.3	101.6
193	32650	3.2	16.4482	1.0	0.8680	2.8	0.1036	2.6	0.94	635.2	16.0	634.5	13.3	632.1	20.8	635.2	16.0	100.5
177	22301	2.1	16.3398	0.9	0.8761	2.6	0.1038	2.4	0.93	636.8	14.5	638.9	12.2	646.3	20.3	636.8	14.5	98.5
127	62362	1.8	16.2417	0.9	0.8846	3.0	0.1042	2.8	0.95	639.0	17.1	643.5	14.1	659.2	20.0	639.0	17.1	96.9
358	90999	4.1	16.4172	0.9	0.8771	2.8	0.1044	2.6	0.95	640.4	16.1	639.4	13.2	636.1	18.7	640.4	16.1	100.7
488	54707	4.3	16.2528	0.7	0.8901	2.4	0.1049	2.2	0.95	643.2	13.7	646.4	11.2	657.7	15.9	643.2	13.7	97.8
58	15298	6.2	15.7262	1.5	0.9232	4.4	0.1053	4.1	0.94	645.4	25.1	664.1	21.3	728.0	32.4	645.4	25.1	88.7
120	33932	1.2	16.2346	1.0	0.8999	3.6	0.1060	3.4	0.96	649.2	21.1	651.6	17.1	660.2	22.2	649.2	21.1	98.3
83	13529	1.2	16.2371	1.3	0.8997	4.0	0.1060	3.8	0.95	649.2	23.6	651.6	19.4	659.8	27.9	649.2	23.6	98.4
308	11774	3.3	15.1668	2.5	0.9643	3.9	0.1061	3.1	0.78	649.9	18.9	685.5	19.6	804.2	51.5	649.9	18.9	80.8
354	68163	1.8	16.2941	1.0	0.8988	3.0	0.1062	2.8	0.94	650.7	17.4	651.1	14.3	652.3	21.1	650.7	17.4	99.8
230	63038	5.1	15.9729	0.8	0.9228	2.3	0.1069	2.1	0.93	654.7	13.2	663.8	11.1	694.9	17.8	654.7	13.2	94.2
323	21690	5.9	15.8039	0.8	0.9338	2.9	0.1070	2.8	0.96	655.5	17.4	669.6	14.2	717.5	17.3	655.5	17.4	91.4
223	225359	2.2	16.2804	0.9	0.9082	3.1	0.1072	3.0	0.95	656.7	18.6	656.1	15.1	654.1	20.3	656.7	18.6	100.4
290	103308	2.6	15.8565	1.0	0.9332	3.2	0.1073	3.0	0.95	657.1	18.7	669.3	15.5	710.4	21.0	657.1	18.7	92.5
882	540824	9.8	16.1718	0.9	0.9180	2.0	0.1077	1.8	0.91	659.2	11.5	661.3	9.9	668.5	18.5	659.2	11.5	98.6
176	173827	1.5	16.2204	1.0	0.9154	2.9	0.1077	2.7	0.94	659.3	17.1	659.9	14.1	662.0	21.9	659.3	17.1	99.6
1006	1187611	24.7	16.1341	0.8	0.9211	2.8	0.1078	2.7	0.96	659.8	16.7	662.9	13.5	673.5	17.4	659.8	16.7	98.0
137	15173	1.2	16.3746	1.1	0.9082	3.5	0.1079	3.3	0.95	660.3	20.6	656.1	16.7	641.7	23.0	660.3	20.6	102.9
133	14563	1.6	16.4479	0.7	0.9046	2.9	0.1079	2.8	0.97	660.6	17.5	654.2	13.8	632.1	14.2	660.6	17.5	104.5
175	81638	2.1	16.3488	0.9	0.9111	2.6	0.1080	2.4	0.94	661.3	15.2	657.6	12.4	645.1	18.8	661.3	15.2	102.5
141	17827	3.4	16.2778	1.1	0.9166	2.6	0.1082	2.4	0.91	662.4	14.8	660.6	12.6	654.4	22.9	662.4	14.8	101.2
376	47068	10.4	16.2849	0.8	0.9192	2.6	0.1086	2.5	0.95	664.4	15.6	661.9	12.7	653.5	18.1	664.4	15.6	101.7
152	34495	1.7	16.1011	1.0	0.9312	2.5	0.1087	2.2	0.91	665.4	14.2	668.2	12.1	677.8	21.5	665.4	14.2	98.2
501	64736	3.0	16.1874	0.7	0.9279	2.3	0.1089	2.2	0.95	666.6	13.9	666.5	11.2	666.4	14.7	666.6	13.9	100.0
586	4798927	3.3	16.1959	0.8	0.9309	2.0	0.1093	1.9	0.92	668.9	12.0	668.1	10.0	665.3	16.6	668.9	12.0	100.5
100	29578	2.9	16.1904	1.3	0.9340	3.3	0.1097	3.0	0.92	670.9	19.4	669.8	16.1	666.0	26.8	670.9	19.4	100.7
909	7333748	7.8	16.3317	0.7	0.9266	2.2	0.1098	2.1	0.94	671.3	13.3	665.8	10.8	647.4	15.9	671.3	13.3	103.7
456	44191	1.7	16.1886	0.6	0.9394	2.5	0.1103	2.4	0.97	674.4	15.3	672.5	12.1	666.2	13.1	674.4	15.3	101.2
246	211048	2.3	16.2599	0.8	0.9418	2.4	0.1111	2.3	0.94	678.9	14.8	673.8	12.1	656.8	17.9	678.9	14.8	103.4
435	209235	2.8	16.1175	0.8	0.9521	2.5	0.1113	2.4	0.95	680.2	15.4	679.2	12.4	675.7	16.1	680.2	15.4	100.7
992	2832269	6.0	16.0119	0.8	0.9613	2.8	0.1116	2.7	0.96	682.2	17.6	684.0	14.0	689.7	16.0	682.2	17.6	98.9
210	55733	2.2	15.9908	0.8	0.9636	2.7	0.1118	2.5	0.95	683.0	16.5	685.2	13.3	692.5	17.3	683.0	16.5	98.6
224	39713	0.8	15.9915	0.9	0.9709	3.0	0.1126	2.9	0.96	687.9	19.1	688.9	15.2	692.4	18.3	687.9	19.1	99.3
695	49335	4.6	16.1242	0.7	0.9656	2.7	0.1129	2.6	0.96	689.7	16.9	686.2	13.4	674.8	15.9	689.7	16.9	102.2
287	164767	2.4	15.9322	0.7	0.9798	2.9	0.1132	2.8	0.97	691.4	18.4	693.5	14.5	700.3	14.2	691.4	18.4	98.7
514	89981	6.2	15.0817	0.7	1.0499	3.3	0.1148	3.2	0.97	700.8	21.1	728.8	17.0	816.1	15.4	700.8	21.1	85.9
472	962677	3.0	15.7597	0.7	1.0144	2.4	0.1159	2.3	0.95	707.2	15.3	711.1	12.2	723.4	15.1	707.2	15.3	97.8
95	41582	1.4	14.4861	1.2	1.1434	3.6	0.1201	3.4	0.94	731.3	23.4	774.1	19.5	899.7	24.7	731.3	23.4	81.3
73	102214	2.3	14.7146	1.0	1.1352	3.5	0.1211	3.4	0.96	737.2	23.3	770.2	18.9	867.3	20.4	737.2	23.3	85.0
443	101758	13.3	14.9166	0.8	1.1591	2.4	0.1254	2.3	0.95	761.6	16.7	781.6	13.3	839.0	15.7	761.6	16.7	90.8
44	20906	3.0	14.9671	1.5	1.1582	5.8	0.1257	5.7	0.97	763.5	40.7	781.1	31.9	832.0	31.0	763.5	40.7	91.8
262	45053	1.7	15.3836	0.8	1.1290	3.3	0.1260	3.2	0.97	764.8	22.9	767.3	17.5	774.5	15.9	764.8	22.9	98.8
343	89836	2.1	15.4847	0.9	1.1397	2.9	0.1280	2.8	0.95	776.4	20.6	772.4	15.9	760.7	18.6	776.4	20.6	102.1
277	24203	10.2	14.3175	1.0	1.2358	2.9	0.1283	2.7	0.94	778.3	20.0	817.0	16.3	923.8	19.7	778.3	20.0	84.2
183	50691	3.0	15.2201	1.0	1.1810	3.2	0.1304	3.0	0.95	790.0	22.2	791.8	17.4	796.9	21.7	790.0	22.2	99.1
141	35251	1.4	15.2507	0.8	1.1819	2.6	0.1307	2.5	0.96	792.0	18.9	792.2	14.6	792.7	15.8	792.0	18.9	99.9
59	9189	1.2	14.4122	1.3	1.2955	4.2	0.1354	4.0	0.95	818.7	30.9	843.7	24.2	910.2	26.7	818.7	30.9	89.9
880	262458	69.1	14.7680	0.8	1.2650	2.1	0.1355	1.9	0.92	819.1	14.6	830.1	11.7	859.8	17.1	819.1	14.6	95.3
361	214885	8.1	14.4832	0.8	1.3253	2.9	0.1392	2.8	0.96	840.2	21.8	856.8	16.6	900.1	15.8	840.2	21.8	93.4
193	12788	2.2	14.2816	1.7	1.3565	3.1	0.1405	2.6	0.84	847.5	20.8	870.4	18.3	928.9	34.9	847.5	20.8	91.2
319	182366	2.4	14.3985	0.6	1.3460	2.4	0.1406	2.4	0.97	847.9	18.7	865.8	14.2	912.2	13.0	847.9	18.7	92.9
424	551825	4.6	14.1168	0.6	1.4727	2.6	0.1508	2.6	0.97	905.4	21.6	919.2	15.9	952.7	12.2	952.7	12.2	95.0
407	504079	11.1	13.9222	0.6	1.5971	2.1	0.1613	2.0	0.96	963.8	18.1	969.1	13.2	981.1	12.7	981.1	12.7	98.2
297	153046	1.5	13.9150	0.7	1.5735	2.4	0.1588	2.3	0.96	950.1	20.5	959.8	15.0	982.1	14.2	982.1	14.2	96.7
288	82492	3.5	13.9007	0.9	1.5437	2.7	0.1556	2.6	0.95	932.4	22.6	948.0	16.9	984.2	17.5	984.2	17.5	94.7
61	9477	3.5	13.8407	1.2	1.6760	4.1	0.1682	3.9	0.96	1002.4	36.6	999.5	26.2	993.0	24.7	993.0	24.7	100.9
112	39605	1.0	13.8190	1.0	1.5254	3.7	0.1529	3.6	0.96	917.1	30.5	940.7	22.7	996.2	20.2	996.2	20.2	92.1
59	70946	1.9	13.8173	1.1	1.4089	4.5	0.1412	4.4	0.97	851.4	34.8	892.7	26.8	996.5	23.1	996.5	23.1	85.4
161	40414	2.9	13.7785	0.8	1.7480	3.6	0.1747	3.5	0.98	1037.8	33.9	1026.4	23.4	1002.1	16.0	1002.1	16.0	103.6
204	97818	2.9	13.7776	0.7	1.6849	3.0	0.1684	2.9	0.98	1003.1	27.1	1002.9	19.1	1002.3	13.4	1002.3	13.4	100.1
472	240893	3.0	13.7513	0.7	1.7257	1.8	0.1721	1.7	0.93	1023.7	16.3	1018.2	11.9	1006.2	13.8	1006.2	13.8	101.7
312	151940	3.5	13.6968	0.9	1.6199	2.5	0.1609	2.3	0.94	961.9	20.8	978.0	15.6	1014.2	17.4	1014.2	17.4	94.8
284	2174136	4.2	13.6817	1.1	1.6288	4.1	0.1616	4.0	0.97	965.8	35.9	981.4	26.0	1016.4	21.6	1016.4	21.6	95.0

298	84495	2.8	13.6270	0.7	1.7326	3.3	0.1712	3.2	0.98	1018.9	30.4	1020.7	21.3	1024.6	14.4	1024.6	14.4	99.4
282	468484	37.9	13.6208	0.8	1.7729	3.0	0.1751	2.9	0.96	1040.4	27.4	1035.6	19.2	1025.5	16.1	1025.5	16.1	101.5
280	126938	2.5	13.6127	1.2	1.6938	3.9	0.1672	3.7	0.95	996.8	34.5	1006.2	25.1	1026.7	24.7	1026.7	24.7	97.1
182	39230	3.1	13.6055	0.8	1.7047	2.9	0.1682	2.8	0.96	1002.3	26.4	1010.3	18.9	1027.8	15.8	1027.8	15.8	97.5
127	6554368	1.2	13.5975	1.0	1.6941	2.8	0.1671	2.6	0.94	995.9	24.4	1006.3	18.0	1028.9	19.7	1028.9	19.7	96.8
217	5495341	3.3	13.5922	0.8	1.7577	2.5	0.1733	2.3	0.94	1030.1	22.2	1030.0	16.0	1029.7	16.9	1029.7	16.9	100.0
80	37979	3.2	13.5900	0.8	1.8062	3.7	0.1780	3.6	0.97	1056.2	35.2	1047.7	24.3	1030.0	17.1	1030.0	17.1	102.5
141	161408	1.4	13.5883	0.9	1.6085	3.2	0.1585	3.1	0.96	948.5	27.3	973.5	20.1	1030.3	17.5	1030.3	17.5	92.1
145	63594	1.5	13.5521	0.9	1.7900	3.2	0.1759	3.0	0.96	1044.7	29.4	1041.8	20.8	1035.7	18.9	1035.7	18.9	100.9
255	66365	3.7	13.5374	0.9	1.6722	2.7	0.1642	2.5	0.94	980.0	22.7	998.0	17.0	1037.9	19.1	1037.9	19.1	94.4
434	23039	2.3	13.5290	0.7	1.5699	2.5	0.1540	2.4	0.96	923.6	20.7	958.4	15.6	1039.1	14.8	1039.1	14.8	88.9
537	731215	2.9	13.5275	0.8	1.7664	2.4	0.1733	2.2	0.95	1030.3	21.2	1033.2	15.3	1039.4	15.3	1039.4	15.3	99.1
330	92555	2.1	13.5272	0.8	1.8140	2.4	0.1780	2.3	0.94	1055.9	22.3	1050.5	15.9	1039.4	16.9	1039.4	16.9	101.6
247	113293	12.6	13.5120	0.8	1.7846	2.8	0.1749	2.7	0.96	1039.0	26.2	1039.9	18.5	1041.7	16.2	1041.7	16.2	99.7
269	126915	5.3	13.5067	0.8	1.8024	2.7	0.1766	2.5	0.96	1048.2	24.6	1046.3	17.4	1042.5	15.7	1042.5	15.7	100.5
390	162871	2.4	13.5053	0.7	1.7992	2.3	0.1762	2.2	0.95	1046.4	21.4	1045.2	15.2	1042.7	15.1	1042.7	15.1	100.4
86	39208	1.4	13.5010	1.1	1.7486	3.6	0.1712	3.4	0.95	1018.8	32.2	1026.6	23.2	1043.3	22.3	1043.3	22.3	97.7
668	710111	4.9	13.4935	0.7	1.7678	2.5	0.1730	2.4	0.96	1028.6	23.0	1033.7	16.4	1044.4	15.0	1044.4	15.0	98.5
70	113377	1.6	13.4934	0.8	1.8744	4.1	0.1834	4.0	0.98	1085.7	40.3	1072.1	27.3	1044.5	16.8	1044.5	16.8	104.0
200	61724	3.8	13.4899	0.8	1.7324	2.7	0.1695	2.6	0.95	1009.3	24.0	1020.6	17.4	1045.0	17.1	1045.0	17.1	96.6
276	85716	3.0	13.4586	0.6	1.7779	2.7	0.1735	2.6	0.97	1031.6	24.7	1037.4	17.3	1049.7	13.1	1049.7	13.1	98.3
222	101959	2.7	13.4372	0.9	1.7446	2.7	0.1700	2.6	0.94	1012.2	23.9	1025.2	17.4	1052.9	17.9	1052.9	17.9	96.1
296	186582	4.2	13.4342	0.8	1.8216	2.6	0.1775	2.5	0.96	1053.2	24.0	1053.3	16.9	1053.4	15.3	1053.4	15.3	100.0
236	108640	1.0	13.4307	0.9	1.6659	3.0	0.1623	2.8	0.96	969.4	25.6	995.6	18.9	1053.9	17.3	1053.9	17.3	92.0
412	68883	2.9	13.4276	0.8	1.7678	2.6	0.1722	2.4	0.95	1024.0	23.1	1033.7	16.7	1054.3	16.1	1054.3	16.1	97.1
109	8613368	1.9	13.4233	1.0	1.7692	3.0	0.1722	2.9	0.95	1024.4	27.4	1034.2	19.8	1055.0	19.6	1055.0	19.6	97.1
253	126526	1.8	13.3971	0.9	1.7628	2.5	0.1713	2.3	0.93	1019.2	22.1	1031.9	16.2	1058.9	18.0	1058.9	18.0	96.2
68	14719	1.8	13.3859	1.0	1.9275	4.1	0.1871	4.0	0.97	1105.8	40.9	1090.7	27.7	1060.6	19.5	1060.6	19.5	104.3
128	35504	3.1	13.3605	1.3	1.8120	8.0	0.1756	7.9	0.99	1042.8	75.6	1049.8	52.1	1064.4	25.6	1064.4	25.6	98.0
228	58024	2.2	13.3267	0.8	1.8343	2.7	0.1773	2.6	0.96	1052.2	25.2	1057.8	17.8	1069.5	15.8	1069.5	15.8	98.4
182	42740	1.9	13.3089	0.9	1.8505	2.8	0.1786	2.7	0.95	1059.4	26.2	1063.6	18.7	1072.2	18.5	1072.2	18.5	98.8
269	98905	2.5	13.3060	0.8	1.8484	2.5	0.1784	2.3	0.95	1058.1	22.9	1062.9	16.3	1072.6	15.9	1072.6	15.9	98.6
123	28711	1.6	13.2974	0.9	1.8663	3.2	0.1800	3.1	0.96	1066.9	30.4	1069.2	21.3	1073.9	17.5	1073.9	17.5	99.3
495	428023	4.1	13.2940	0.8	1.7357	2.6	0.1673	2.5	0.95	997.5	22.6	1021.9	16.6	1074.5	16.4	1074.5	16.4	92.8
644	299855	1.7	13.2794	0.8	1.8738	2.4	0.1805	2.3	0.95	1069.5	22.6	1071.9	16.0	1076.7	15.2	1076.7	15.2	99.3
140	94418	1.1	13.2659	0.9	1.8258	2.9	0.1757	2.7	0.95	1043.3	26.4	1054.8	18.9	1078.7	17.9	1078.7	17.9	96.7
116	54760	1.5	13.2369	1.0	1.7166	4.2	0.1648	4.1	0.97	983.4	37.0	1014.8	26.8	1083.1	19.5	1083.1	19.5	90.8
149	47287	5.5	13.2315	0.9	1.8197	4.7	0.1746	4.6	0.98	1037.5	44.3	1052.6	30.8	1083.9	17.3	1083.9	17.3	95.7
313	837592	0.8	13.1503	0.8	1.9365	2.6	0.1847	2.5	0.95	1092.6	25.2	1093.8	17.7	1096.2	16.4	1096.2	16.4	99.7
220	25364	3.8	13.1333	0.8	1.8251	3.0	0.1738	2.9	0.96	1033.3	27.5	1054.5	19.7	1098.8	16.7	1098.8	16.7	94.0
233	877239	2.5	13.1094	1.0	1.9865	2.7	0.1889	2.5	0.93	1115.2	25.6	1110.9	18.1	1102.5	19.2	1102.5	19.2	101.2
226	343992	2.5	13.1062	0.8	1.9178	2.0	0.1823	1.9	0.93	1079.5	18.9	1087.3	13.7	1103.0	15.4	1103.0	15.4	97.9
212	873981	1.5	13.1025	0.8	1.9297	2.6	0.1834	2.4	0.95	1085.4	24.4	1091.4	17.2	1103.5	15.9	1103.5	15.9	98.4
84	537885	2.6	13.0968	0.8	1.9362	2.9	0.1839	2.8	0.96	1088.3	27.6	1093.7	19.2	1104.4	15.9	1104.4	15.9	98.5
128	37846	0.5	13.0822	0.9	1.9924	3.0	0.1890	2.8	0.95	1116.2	28.7	1112.9	20.0	1106.6	18.9	1106.6	18.9	100.9
101	134541	2.2	13.0815	0.8	1.9367	3.7	0.1837	3.6	0.98	1087.4	35.8	1093.9	24.5	1106.7	15.8	1106.7	15.8	98.3
95	88379	1.4	13.0697	1.0	2.0836	3.0	0.1975	2.9	0.95	1161.9	30.4	1143.4	20.7	1108.5	19.0	1108.5	19.0	104.8
82	1506940	1.8	13.0129	0.9	1.9794	3.0	0.1868	2.8	0.95	1104.1	28.9	1108.5	20.3	1117.2	18.9	1117.2	18.9	98.8
208	879533	2.4	12.9997	0.9	1.9796	2.5	0.1866	2.3	0.94	1103.1	23.5	1108.6	16.7	1119.3	17.4	1119.3	17.4	98.6
116	29012	2.0	12.9570	0.8	1.8838	3.8	0.1770	3.7	0.98	1050.7	36.3	1075.4	25.4	1125.8	15.5	1125.8	15.5	93.3
150	498291	3.5	12.8599	1.3	2.0729	4.1	0.1933	3.9	0.95	1139.4	40.3	1139.9	27.9	1140.8	26.2	1140.8	26.2	99.9
393	15138	1.7	12.8421	0.9	1.9493	2.3	0.1816	2.1	0.93	1075.5	21.3	1098.2	15.6	1143.5	17.3	1143.5	17.3	94.0
265	56056	3.1	12.7177	0.8	2.1639	2.7	0.1996	2.6	0.96	1173.1	28.0	1169.5	18.9	1162.8	15.3	1162.8	15.3	100.9
138	47475	1.9	12.6581	0.8	2.1777	2.5	0.1999	2.4	0.95	1174.9	25.3	1173.9	17.2	1172.2	15.0	1172.2	15.0	100.2
671	762650	8.4	12.6111	0.7	1.7849	2.2	0.1633	2.1	0.95	974.8	18.6	1040.0	14.1	1179.5	13.8	1179.5	13.8	82.6
134	58208	2.0	12.5744	0.8	2.2681	3.1	0.2068	3.0	0.97	1212.0	32.9	1202.4	21.6	1185.3	15.2	1185.3	15.2	102.3
566	1882361	1.2	12.3727	0.5	2.3067	2.1	0.2070	2.0	0.97	1212.8	22.6	1214.3	15.0	1217.1	10.5	1217.1	10.5	99.6
143	8295	2.2	12.3141	1.9	2.0145	3.5	0.1799	2.9	0.84	1066.5	28.9	1120.4	23.8	1226.5	37.6	1226.5	37.6	87.0
35	75376	0.9	12.2211	1.0	2.4486	4.8	0.2170	4.7	0.98	1266.2	54.5	1257.0	34.9	1241.3	19.4	1241.3	19.4	102.0
138	32904	2.0	12.1827	0.8	2.3944	2.8	0.2116	2.6	0.96	1237.1	29.8	1240.9	19.8	1247.5	15.6	1247.5	15.6	99.2
115	164932	2.7	11.5802	0.8	2.7400	2.9	0.2301	2.8	0.96	1335.2	33.7	1339.4	21.7	1346.1	15.9	1346.1	15.9	99.2
754	192000	1.4	11.4028	0.6	2.6911	2.1	0.2226	2.0	0.95	1295.4	23.8	1326.0	15.7	1375.8	12.2	1375.8	12.2	94.2
118	67986	1.2	11.3111	0.7	2.9710	3.0	0.2437	2.9	0.97	1406.1	36.6	1400.2	22.7	1391.4	14.4	1391.4	14.4	101.1
90	61021	1.2	11.1521	0.7	3.0212	2.6	0.2444	2.5	0.96	1409.3	32.1	1413.0	20.2	1418.5	14.3	1418.5	14.3	99.4
176	733216	1.2	11.1264	0.7	2.9640	2.7	0.2392	2.6	0.96	1382.5	33.0	1398.4	20.9	1422.9	13.8	1422.9	13.8	97.2
88	66353	1.1	11.0343	0.9	3.0633	2.8	0.2451	2.6	0.94	1413.4	32.9	1423.6	21.1	1438.8	17.6	1438.8	17.6	98.2
189	460881	0.8	10.9522	0.7	3.1936	3.0	0.2537	2.9	0.97	1457.4	37.5	1455.6	23.0	1453.0	13.9	1453.0	13.9	100.3
116	49407	1.1	10.8677	0.9	3.2823	3.3	0.2587	3.2	0.96	1483.2	42.4	1476.9	26.0	1467.7	18.0	1467.7	18.0	101.1
222	234532	1.0	9.9239	1.0	3.9936	3.2	0.2874	3.0	0.95	1628.7	43.2	1632.9	25.7	1638.3	18.6	1638.3	18.6	99.4
125	112343	1.8	9.7028	0.9	4.2691	3.2	0.3004	3.1	0.96	1693.4	45.7	1687.4	26.4	1680.0	17.4	1680.0	17.4	100.8
163	61011	2.3	9.6718	0.7	4.2441	2.7	0.2977	2.6	0.96	1680.0	39.0	1682.6	22.4	1685.9	13.3	1685.9	13.3	99.6

163	61011	2.3	9.6718	0.7	4.2441	2.7	0.2977	2.6	0.96	1680.0	39.0	1682.6	22.4	1685.9	13.3	1685.9	13.3	99.6
261	412130	3.0	9.6482	0.7	4.3104	2.6	0.3016	2.5	0.97	1699.3	38.0	1695.3	21.7	1690.4	12.5	1690.4	12.5	100.5
141	325764	1.7	9.3411	0.7	4.6263	3.0	0.3134	3.0	0.97	1757.5	45.4	1754.0	25.3	1749.8	12.5	1749.8	12.5	100.4
154	72215	2.0	6.3346	0.7	10.1929	3.3	0.4683	3.2	0.98	2476.1	65.9	2452.4	30.4	2432.9	12.2	2432.9	12.2	101.8
363	775426	1.4	5.7745	0.6	9.4539	2.4	0.3959	2.3	0.96	2150.3	42.2	2383.1	22.0	2588.6	10.8	2588.6	10.8	83.1
1098	900843	2.9	5.7621	0.8	12.1874	2.7	0.5093	2.6	0.96	2653.7	57.2	2618.9	25.7	2592.2	12.6	2592.2	12.6	102.4
268	174546	1.7	5.6223	0.8	12.6560	2.6	0.5161	2.5	0.96	2682.5	54.5	2654.4	24.4	2633.0	12.5	2633.0	12.5	101.9
81	146395	1.5	5.5781	0.9	12.2620	4.0	0.4961	3.9	0.97	2596.9	83.6	2624.7	37.7	2646.1	15.3	2646.1	15.3	98.1
263	2079691	1.7	5.5018	0.7	12.1190	2.7	0.4836	2.6	0.97	2542.9	54.9	2613.7	25.3	2669.0	10.8	2669.0	10.8	95.3
73	96774	1.5	5.3762	0.8	13.2073	3.6	0.5150	3.5	0.97	2677.8	76.5	2694.6	33.8	2707.1	13.3	2707.1	13.3	98.9
148	78184	3.0	5.3415	0.8	10.6773	3.3	0.4136	3.2	0.97	2231.5	61.1	2495.5	31.1	2717.8	13.8	2717.8	13.8	82.1
138	68558	0.7	4.6646	0.8	15.9950	3.4	0.5411	3.3	0.97	2788.1	74.1	2876.5	32.2	2938.9	13.2	2938.9	13.2	94.9

MOU

					Isotope ratios							Apparent ages (Ma)						
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
186	24498	1.6	17.3414	0.8	0.6264	2.3	0.0788	2.2	0.93	488.9	10.2	493.9	9.0	517.1	18.2	488.9	10.2	94.5
228	93404	2.0	16.8399	1.2	0.6502	2.8	0.0794	2.6	0.91	492.6	12.1	508.6	11.2	581.2	25.0	492.6	12.1	84.8
254	30210	2.7	17.4115	0.8	0.6291	2.5	0.0794	2.4	0.94	492.8	11.3	495.5	9.9	508.2	18.5	492.8	11.3	97.0
247	24390	2.3	17.4923	0.7	0.6262	2.3	0.0794	2.2	0.95	492.8	10.4	493.7	9.0	498.0	15.9	492.8	10.4	99.0
695	122821	4.5	17.4039	0.7	0.6307	1.9	0.0796	1.8	0.94	493.8	8.7	496.6	7.6	509.2	14.5	493.8	8.7	97.0
214	49620	2.2	17.3173	0.9	0.6344	2.5	0.0797	2.3	0.93	494.2	11.0	498.8	9.9	520.1	20.6	494.2	11.0	95.0
202	52516	1.2	17.3485	1.0	0.6351	2.6	0.0799	2.5	0.93	495.6	11.8	499.3	10.4	516.2	20.9	495.6	11.8	96.0
403	551838	2.9	17.4593	0.9	0.6325	2.3	0.0801	2.2	0.93	496.7	10.4	497.7	9.2	502.2	19.2	496.7	10.4	98.9
91	21315	1.1	17.2935	1.5	0.6390	3.3	0.0801	2.9	0.89	497.0	13.9	501.7	12.9	523.1	32.8	497.0	13.9	95.0
199	21927	2.7	17.4183	1.0	0.6355	2.8	0.0803	2.6	0.93	497.8	12.6	499.5	11.1	507.3	22.1	497.8	12.6	98.1
132	16964	3.1	17.5078	1.0	0.6323	2.6	0.0803	2.4	0.92	497.8	11.6	497.5	10.3	496.1	22.0	497.8	11.6	100.4
293	92106	4.5	17.3348	0.7	0.6398	2.0	0.0804	1.8	0.93	498.7	8.8	502.2	7.9	517.9	16.4	498.7	8.8	96.3
781	605718	6.0	17.4274	0.8	0.6366	2.1	0.0805	1.9	0.92	498.9	9.2	500.2	8.2	506.2	17.5	498.9	9.2	98.6
240	325744	3.1	17.2910	0.9	0.6417	2.5	0.0805	2.3	0.93	499.0	11.2	503.4	9.9	523.4	19.4	499.0	11.2	95.3
286	76707	2.4	17.5077	0.9	0.6359	2.6	0.0807	2.4	0.94	500.6	11.6	499.8	10.1	496.1	19.0	500.6	11.6	100.9
163	18923	2.8	17.4775	0.9	0.6373	2.6	0.0808	2.4	0.94	500.8	11.7	500.6	10.2	499.9	19.4	500.8	11.7	100.2
126	114618816	3.1	16.9097	1.1	0.6613	2.8	0.0811	2.6	0.92	502.7	12.4	515.4	11.2	572.2	23.6	502.7	12.4	87.9
278	384617	2.9	17.2970	1.0	0.6470	2.7	0.0812	2.5	0.93	503.1	11.9	506.6	10.6	522.7	21.7	503.1	11.9	96.2
141	306564	2.1	16.8925	0.9	0.6627	2.6	0.0812	2.5	0.94	503.2	12.1	516.3	10.7	574.4	19.0	503.2	12.1	87.6
121	24224	2.8	17.2533	1.1	0.6489	3.4	0.0812	3.2	0.95	503.2	15.6	507.8	13.5	528.3	23.0	503.2	15.6	95.3
432	58397	0.5	17.5699	0.8	0.6372	2.4	0.0812	2.2	0.94	503.3	10.7	500.6	9.3	488.3	18.3	503.3	10.7	103.1
289	28203	3.0	17.6141	0.7	0.6363	2.1	0.0813	2.0	0.94	503.8	9.5	500.0	8.2	482.7	15.5	503.8	9.5	104.4
241	27514	2.6	17.3657	0.7	0.6456	2.3	0.0813	2.2	0.95	503.9	10.5	505.8	9.1	514.0	16.2	503.9	10.5	98.0
182	51533	1.3	17.1207	1.1	0.6551	2.7	0.0814	2.5	0.91	504.2	12.1	511.6	11.0	545.1	24.1	504.2	12.1	92.5
572	76817	3.3	17.4363	0.7	0.6468	1.8	0.0818	1.6	0.92	506.9	8.0	506.5	7.1	505.1	15.0	506.9	8.0	100.4
384	188882	2.9	17.1263	0.9	0.6590	2.0	0.0819	1.8	0.91	507.2	9.0	514.0	8.2	544.4	18.9	507.2	9.0	93.2
242	379829	2.9	17.2557	0.7	0.6548	2.2	0.0819	2.1	0.95	507.7	10.2	511.4	8.8	528.0	15.0	507.7	10.2	96.2
253	262345	2.4	17.0297	0.9	0.6636	2.7	0.0820	2.5	0.95	507.8	12.4	516.8	10.9	556.8	18.9	507.8	12.4	91.2
185	347571	2.7	17.2000	1.0	0.6572	2.7	0.0820	2.5	0.93	507.9	12.3	512.9	10.9	535.0	21.4	507.9	12.3	94.9
150	47364	1.4	17.2059	1.1	0.6570	2.9	0.0820	2.7	0.93	507.9	13.2	512.7	11.7	534.3	23.7	507.9	13.2	95.1
65	16287	3.2	17.2558	1.5	0.6556	3.8	0.0820	3.5	0.92	508.3	17.1	511.9	15.4	528.0	33.6	508.3	17.1	96.3
225	43193	3.0	17.3562	0.8	0.6526	2.3	0.0821	2.1	0.94	508.9	10.5	510.1	9.2	515.2	16.9	508.9	10.5	98.8
316	77472	3.2	17.4715	0.8	0.6485	2.5	0.0822	2.3	0.94	509.1	11.5	507.6	9.9	500.7	18.0	509.1	11.5	101.7
240	88690	2.5	17.3251	1.0	0.6540	2.5	0.0822	2.3	0.92	509.1	11.1	511.0	9.9	519.1	21.2	509.1	11.1	98.1
99	38736	25.2	16.8930	1.1	0.6729	2.9	0.0824	2.7	0.92	510.7	13.2	522.5	11.9	574.3	24.7	510.7	13.2	88.9
262	56107	4.7	17.2617	0.7	0.6585	2.5	0.0824	2.4	0.96	510.7	11.9	513.7	10.3	527.2	16.4	510.7	11.9	96.9
128	156348	3.2	17.1678	1.1	0.6639	3.2	0.0827	3.0	0.94	512.0	14.8	517.0	13.0	539.1	24.8	512.0	14.8	95.0
181	383420	2.6	17.1153	1.0	0.6684	2.3	0.0830	2.1	0.91	513.8	10.2	519.7	9.2	545.8	21.0	513.8	10.2	94.1
196	3639971	3.1	16.7360	0.9	0.6843	2.1	0.0831	2.0	0.91	514.4	9.7	529.4	8.8	594.6	19.0	514.4	9.7	86.5
115	138611	2.4	16.8777	1.1	0.6790	3.2	0.0831	3.1	0.95	514.7	15.2	526.2	13.3	576.3	23.0	514.7	15.2	89.3
261	193543	1.4	16.9801	0.7	0.6750	1.9	0.0831	1.8	0.93	514.7	8.7	523.7	7.7	563.1	14.9	514.7	8.7	91.4
174	791922	1.0	17.1320	1.0	0.6698	2.5	0.0832	2.3	0.92	515.3	11.1	520.6	10.0	543.7	21.5	515.3	11.1	94.8
155	75471	3.1	17.0011	0.9	0.6752	2.8	0.0832	2.6	0.94	515.5	13.0	523.8	11.4	560.4	20.3	515.5	13.0	92.0
78	7160	3.0	17.0385	1.3	0.6737	3.7	0.0833	3.5	0.94	515.5	17.3	523.0	15.2	555.7	28.1	515.5	17.3	92.8
199	58456	8.4	17.0538	0.8	0.6738	3.1	0.0833	3.0	0.97	516.0	15.0	523.0	12.8	553.7	17.0	516.0	15.0	93.2
162	57180	7.5	16.9752	1.0	0.6770	3.0	0.0833	2.9	0.95	516.1	14.2	525.0	12.4	563.7	20.8	516.1	14.2	91.5
202	35459	9.6	17.2940	1.0	0.6655	2.2	0.0835	2.0	0.90	516.8	10.1	518.0	9.1	523.1	21.4	516.8	10.1	98.8
143	15716	11.0	17.0632	0.9	0.6746	2.8	0.0835	2.6	0.94	516.9	13.0	523.5	11.4	552.5	20.0	516.9	13.0	93.6
130	19821	2.3	16.9667	1.1	0.6785	2.8	0.0835	2.5	0.92	516.9	12.6	525.9	11.3	564.8	23.7	516.9	12.6	91.5
108	20379	2.9	17.2764	1.0	0.6674	3.6	0.0836	3.5	0.96	517.7	17.2	519.1	14.6	525.3	21.1	517.7	17.2	98.6
111	44828	1.9	16.9726	1.1	0.6810	3.0	0.0838	2.8	0.93	518.9	13.8	527.4	12.2	564.1	24.1	518.9	13.8	92.0
96	76153	2.7	17.1575	1.3	0.6742	3.8	0.0839	3.6	0.94	519.3	18.0	523.3	15.7	540.4	28.3	519.3	18.0	96.1
302	37574	2.8	17.3917	0.8	0.6665	2.4	0.0841	2.3	0.95	520.3	11.3	518.6	9.7	510.7	17.2	520.3	11.3	101.9
51	9358	3.8	17.3114	1.4	0.6701	3.9	0.0841	3.7	0.93	520.7	18.4	520.8	16.0	520.9	30.6	520.7	18.4	100.0
40	9358	2.1	17.3701	2.0	0.6685	4.4	0.0842	4.0	0.90	521.2	19.9	519.8	18.0	513.4	42.9	521.2	19.9	101.5
339	139644	2.7	17.0774	0.9	0.6804	2.6	0.0843	2.4	0.93	521.6	12.1	527.0	10.6	550.7	20.2	521.6	12.1	94.7
230	80633	3.2	17.1645	1.1	0.6770	2.6	0.0843	2.3	0.90	521.6	11.6	525.0	10.5	539.5	24.5	521.6	11.6	96.7
242	53865	3.4	17.2673	0.8	0.6739	2.5	0.0844	2.3	0.94	522.3	11.7	523.1	10.1	526.5	18.1	522.3	11.7	99.2
110	11504	3.2	17.1766	1.1	0.6775	3.0	0.0844	2.8	0.93	522.4	14.0	525.3	12.3	538.0	23.6	522.4	14.0	97.1
68	27761	1.8	16.8808	1.3	0.6897	3.4	0.0844	3.1	0.93	522.5	15.8	532.6	14.1	575.9	27.6	522.5	15.8	90.7
300	166126	4.4	17.1781	0.6	0.6797	1.7	0.0847	1.6	0.94	524.0	8.2	526.6	7.1	537.8	13.3	524.0	8.2	97.4
127	14028	3.4	17.1904	1.2	0.6815	2.7	0.0850	2.4	0.90	525.7	12.3	527.7	11.1	536.3	26.0	525.7	12.3	98.0
55	91683	2.5	16.8646	1.6	0.6952	4.2	0.0850	3.9	0.93	526.1	19.6	535.9	17.5	578.0	34.2	526.1	19.6	91.0
79	8392	3.2	17.2103	1.5	0.6819	3.6	0.0851	3.3	0.91	526.6	16.6	527.9	15.0	533.7	33.7	526.6	16.6	98.7
183	181673	3.2	17.1116	0.7	0.6865	2.0	0.0852	1.9	0.94	527.1	9.5	530.7	8.2	546.3	14.6	527.1	9.5	96.5
231	66572	2.7	16.3493	1.7	0.7187	3.1	0.0852	2.6	0.83	527.2	13.2	549.9	13.3	645.1	37.1	527.2	13.2	81.7

284	92086	5.7	17.0208	0.9	0.6914	2.3	0.0854	2.2	0.93	528.0	11.1	533.7	9.7	557.9	18.8	528.0	11.1	94.6
142	19099	9.8	17.0821	1.0	0.6892	3.2	0.0854	3.0	0.95	528.2	15.3	532.3	13.2	550.1	22.5	528.2	15.3	96.0
732	78901	4.7	17.1548	0.6	0.6867	1.6	0.0854	1.5	0.94	528.5	7.8	530.8	6.8	540.8	12.6	528.5	7.8	97.7
127	22768	2.5	17.1279	1.1	0.6895	2.7	0.0856	2.5	0.92	529.7	12.7	532.5	11.3	544.2	23.5	529.7	12.7	97.3
152	132103	6.9	16.5894	1.0	0.7120	2.7	0.0857	2.5	0.93	529.9	12.8	546.0	11.5	613.6	22.2	529.9	12.8	86.4
50	14806	3.4	16.9883	1.7	0.6955	3.7	0.0857	3.3	0.89	530.0	16.6	536.1	15.3	562.1	36.9	530.0	16.6	94.3
97	46196	3.3	17.0513	1.3	0.6938	2.9	0.0858	2.5	0.88	530.7	12.8	535.1	11.9	554.0	29.3	530.7	12.8	95.8
117	75998	2.5	17.1272	1.1	0.6908	2.7	0.0858	2.5	0.91	530.7	12.7	533.3	11.4	544.3	24.8	530.7	12.7	97.5
37	17705	2.4	16.9406	1.5	0.6994	3.9	0.0859	3.6	0.92	531.4	18.5	538.4	16.5	568.2	33.7	531.4	18.5	93.5
131	32517	1.3	17.2490	1.0	0.6875	2.6	0.0860	2.4	0.93	531.9	12.1	531.3	10.6	528.8	21.0	531.9	12.1	100.6
123	43442	6.4	16.9111	0.9	0.7013	2.3	0.0860	2.1	0.91	531.9	10.7	539.6	9.6	572.0	20.2	531.9	10.7	93.0
97	75857	2.9	17.0752	0.9	0.6952	2.9	0.0861	2.8	0.95	532.4	14.1	535.9	12.0	550.9	18.9	532.4	14.1	96.6
370	541933	2.7	17.2122	0.8	0.6898	1.9	0.0861	1.7	0.90	532.5	8.9	532.7	8.0	533.5	18.3	532.5	8.9	99.8
153	25968	2.0	17.0064	1.2	0.6997	2.7	0.0863	2.5	0.90	533.6	12.6	538.6	11.4	559.8	25.5	533.6	12.6	95.3
185	155815	3.7	16.9748	0.9	0.7020	2.3	0.0864	2.1	0.92	534.3	10.9	540.0	9.6	563.8	19.2	534.3	10.9	94.8
662	5684901	23.9	17.1425	0.6	0.6968	1.8	0.0866	1.7	0.95	535.6	8.7	536.9	7.4	542.3	12.3	535.6	8.7	98.8
188	43919	3.7	16.9288	1.0	0.7059	2.7	0.0867	2.5	0.93	535.8	12.9	542.3	11.3	569.7	21.3	535.8	12.9	94.0
118	54963	12.3	17.1546	1.0	0.7024	2.8	0.0874	2.6	0.93	540.1	13.6	540.2	11.8	540.8	22.0	540.1	13.6	99.9
397	150404	7.0	16.7903	1.0	0.7216	2.3	0.0879	2.1	0.91	542.9	10.8	551.6	9.7	587.6	20.7	542.9	10.8	92.4
280	21398	4.7	16.8889	1.1	0.7185	2.6	0.0880	2.4	0.92	543.8	12.5	549.8	11.1	574.8	22.9	543.8	12.5	94.6
261	280516	13.9	16.9172	0.8	0.7179	2.0	0.0881	1.9	0.93	544.2	9.9	549.4	8.7	571.2	16.8	544.2	9.9	95.3
180	57331	3.7	17.0036	0.8	0.7154	2.1	0.0882	1.9	0.92	545.0	9.9	547.9	8.7	560.1	17.5	545.0	9.9	97.3
255	217089	6.6	16.9613	0.7	0.7172	2.4	0.0882	2.3	0.96	545.0	11.9	549.0	10.1	565.5	15.1	545.0	11.9	96.4
202	144150	1.5	17.2247	0.8	0.7073	2.5	0.0884	2.4	0.95	545.9	12.6	543.2	10.7	531.9	17.8	545.9	12.6	102.6
1224	212231	1.8	17.2204	0.7	0.7089	1.6	0.0885	1.4	0.91	546.9	7.6	544.1	6.7	532.4	14.4	546.9	7.6	102.7
177	537922	3.5	16.7095	0.9	0.7335	2.5	0.0889	2.4	0.94	549.0	12.6	558.6	10.9	598.0	18.8	549.0	12.6	91.8
209	51460	9.8	17.1031	1.0	0.7172	2.4	0.0890	2.2	0.92	549.4	11.7	549.0	10.3	547.4	21.3	549.4	11.7	100.4
698	249653	8.6	17.0960	0.6	0.7179	1.9	0.0890	1.8	0.95	549.7	9.5	549.4	8.1	548.3	13.0	549.7	9.5	100.3
126	21478	2.1	16.9359	0.9	0.7257	2.6	0.0891	2.4	0.93	550.5	12.6	554.0	10.9	568.8	19.8	550.5	12.6	96.8
414	61288	18.7	17.0226	0.6	0.7228	1.8	0.0892	1.7	0.94	551.0	9.2	552.3	7.8	557.7	13.4	551.0	9.2	98.8
211	294818	3.9	16.7649	1.1	0.7341	2.7	0.0893	2.5	0.92	551.2	13.1	559.0	11.5	590.9	22.8	551.2	13.1	93.3
385	198994	9.3	17.1949	0.8	0.7169	2.6	0.0894	2.5	0.95	552.0	13.0	548.8	10.9	535.7	17.2	552.0	13.0	103.1
202	252352	7.2	16.6444	0.9	0.7437	2.7	0.0898	2.5	0.94	554.2	13.3	564.6	11.5	606.5	19.0	554.2	13.3	91.4
131	21755	2.3	16.7544	0.9	0.7399	2.6	0.0899	2.4	0.93	555.0	12.8	562.3	11.1	592.2	20.2	555.0	12.8	93.7
350	94349	2.8	17.1468	0.7	0.7232	1.9	0.0899	1.8	0.92	555.1	9.4	552.5	8.2	541.8	16.3	555.1	9.4	102.5
190	1269371	7.5	17.0742	0.9	0.7285	2.4	0.0902	2.2	0.92	556.8	11.7	555.7	10.2	551.1	20.0	556.8	11.7	101.0
84	49349	2.0	16.9609	1.2	0.7338	2.9	0.0903	2.6	0.91	557.1	14.1	558.8	12.5	565.6	26.8	557.1	14.1	98.5
581	157170	5.8	16.9009	0.8	0.7399	2.0	0.0907	1.9	0.92	559.7	10.1	562.4	8.8	573.3	17.5	559.7	10.1	97.6
559	308791	11.3	16.8959	1.0	0.7413	2.3	0.0908	2.0	0.89	560.5	10.8	563.2	9.8	573.9	22.6	560.5	10.8	97.7
138	13905	1.3	17.1690	1.1	0.7305	2.4	0.0910	2.1	0.89	561.2	11.4	556.8	10.3	539.0	24.0	561.2	11.4	104.1
463	44902	1.5	17.0562	0.6	0.7379	1.9	0.0913	1.8	0.94	563.1	9.8	561.2	8.3	553.4	14.1	563.1	9.8	101.8
582	29563	5.2	16.1499	0.8	0.7797	2.4	0.0913	2.3	0.95	563.4	12.3	585.3	10.8	671.3	16.8	563.4	12.3	83.9
556	460637	9.6	16.8123	0.8	0.7492	2.3	0.0913	2.2	0.94	563.5	11.7	567.7	10.1	584.7	17.7	563.5	11.7	96.4
444	66846	6.5	16.9381	0.8	0.7438	1.9	0.0914	1.7	0.90	563.6	9.3	564.6	8.3	568.5	17.9	563.6	9.3	99.1
206	78445	3.1	16.7858	0.8	0.7511	2.2	0.0914	2.1	0.93	564.1	11.3	568.9	9.8	588.1	18.2	564.1	11.3	95.9
362	141164	11.1	16.9142	0.6	0.7459	1.7	0.0915	1.6	0.93	564.4	8.5	565.9	7.3	571.6	13.8	564.4	8.5	98.7
138	18341	1.4	16.8881	0.8	0.7477	2.9	0.0916	2.8	0.96	564.8	15.1	566.9	12.7	575.0	18.4	564.8	15.1	98.2
355	52175	17.3	16.8333	0.8	0.7502	2.7	0.0916	2.6	0.95	565.0	13.8	568.4	11.7	582.0	17.6	565.0	13.8	97.1
145	131869	1.9	16.8697	1.2	0.7493	2.7	0.0917	2.4	0.90	565.4	13.2	567.8	11.8	577.3	26.2	565.4	13.2	97.9
83	50860	485.8	16.7606	1.2	0.7554	3.8	0.0918	3.6	0.95	566.3	19.8	571.3	16.7	591.4	25.2	566.3	19.8	95.8
182	206268	2.2	16.9218	0.9	0.7498	2.2	0.0920	2.0	0.90	567.5	10.9	568.1	9.6	570.6	20.5	567.5	10.9	99.5
322	375184	14.7	16.7381	0.9	0.7584	2.3	0.0921	2.1	0.92	567.7	11.6	573.1	10.1	594.3	19.0	567.7	11.6	95.5
122	12676	2.4	16.6820	0.8	0.7624	2.7	0.0922	2.6	0.95	568.8	14.1	575.4	11.9	601.6	17.6	568.8	14.1	94.5
95	24608	3.1	16.9334	0.8	0.7540	2.8	0.0926	2.6	0.95	570.9	14.5	570.5	12.1	569.1	18.3	570.9	14.5	100.3
82	66984	2.2	16.1674	1.1	0.7918	3.0	0.0928	2.8	0.93	572.3	15.2	592.2	13.4	669.0	24.4	572.3	15.2	85.6
86	30108	0.9	16.9371	1.3	0.7561	3.1	0.0929	2.8	0.90	572.5	15.2	571.7	13.4	568.7	28.5	572.5	15.2	100.7
231	18616	16.9	16.9399	0.9	0.7559	2.2	0.0929	2.0	0.92	572.5	11.0	571.7	9.5	568.3	18.5	572.5	11.0	100.7
824	262024	3.1	16.9825	0.6	0.7554	2.2	0.0930	2.1	0.96	573.5	11.6	571.4	9.7	562.8	14.0	573.5	11.6	101.9
94	17381	1.0	16.6162	1.1	0.7723	3.0	0.0931	2.8	0.93	573.7	15.4	581.1	13.3	610.1	23.1	573.7	15.4	94.0
79	61948	1.3	16.8107	1.1	0.7636	2.7	0.0931	2.5	0.91	573.8	13.5	576.1	11.9	584.9	24.3	573.8	13.5	98.1
829	107923	3.5	17.0565	0.7	0.7527	2.4	0.0931	2.3	0.95	573.9	12.8	569.8	10.7	553.3	15.9	573.9	12.8	103.7
103	11023	1.1	16.6868	1.1	0.7704	3.1	0.0932	2.9	0.93	574.6	15.8	580.0	13.6	600.9	23.7	574.6	15.8	95.6
443	34729	9.5	16.8314	0.8	0.7640	2.2	0.0933	2.1	0.94	574.8	11.3	576.3	9.6	582.3	16.5	574.8	11.3	98.7
381	98219	11.0	16.9865	1.0	0.7587	2.5	0.0935	2.2	0.91	576.0	12.4	573.2	10.8	562.3	22.6	576.0	12.4	102.4
460	95588	106.5	16.9703	0.7	0.7596	2.0	0.0935	1.9	0.95	576.2	10.6	573.8	8.9	564.4	14.3	576.2	10.6	102.1
236	68158	2.5	16.7216	0.9	0.7717	2.4	0.0936	2.3	0.92	576.7	12.4	580.7	10.8	596.5	20.4	576.7	12.4	96.7
387	32698	21.0	16.9751	0.8	0.7602	1.7	0.0936	1.6	0.90	576.7	8.7	574.1	7.7	563.7	16.4	576.7	8.7	102.3
232	51674	2.7	16.7401	0.8	0.7718	2.3	0.0937	2.2	0.93	577.4	12.0	580.8	10.3	594.1	18.2	577.4	12.0	97.2
264	550211	10.8	16.7831	1.0	0.7712	2.5	0.0939	2.3	0.92	578.4	12.8	580.4	11.1	588.5	21.1	578.4	12.8	98.3
334	79390	7.2	16.5708	0.8	0.7814	2.6	0.0939	2.5	0.95	578.6	13.9	586.3	11.7	616.0	17.5	578.6	13.9	93.9
47	7256	1.6	17.0546	1.5	0.7600	5.0	0.0940	4.7	0.96	579.2	26.2	574.0	21.7	553.6	32.0	579.2	26.2	104.6

54	15613	188.7	16.7555	1.1	0.7738	4.6	0.0940	4.4	0.97	579.3	24.5	581.9	20.3	592.1	24.4	579.3	24.5	97.8
125	155387	2.5	16.1786	1.2	0.8040	2.7	0.0943	2.4	0.89	581.2	13.3	599.1	12.1	667.6	26.0	581.2	13.3	87.1
313	61164	6.7	16.7619	0.8	0.7772	2.2	0.0945	2.1	0.93	582.0	11.6	583.9	10.0	591.2	18.0	582.0	11.6	98.4
350	124029	2.0	16.8304	0.9	0.7773	2.3	0.0949	2.1	0.91	584.4	11.7	584.0	10.2	582.4	20.6	584.4	11.7	100.3
931	239036	28.4	16.9784	0.7	0.7725	2.0	0.0951	1.8	0.94	585.8	10.3	581.2	8.7	563.3	14.7	585.8	10.3	104.0
186	17011390	1.5	16.5044	1.1	0.7956	2.7	0.0952	2.5	0.92	586.4	13.8	594.3	12.0	624.7	22.7	586.4	13.8	93.9
256	237817	3.3	16.6377	0.9	0.7893	2.5	0.0952	2.4	0.94	586.5	13.3	590.8	11.3	607.3	19.4	586.5	13.3	96.6
55	11697	2.2	16.5243	1.5	0.7974	3.3	0.0956	2.9	0.89	588.3	16.4	595.3	14.8	622.1	32.6	588.3	16.4	94.6
106	19912	1.4	16.6020	1.1	0.7965	3.0	0.0959	2.8	0.93	590.4	15.7	594.8	13.5	612.0	24.4	590.4	15.7	96.5
368	247220	6.0	16.8307	0.6	0.7873	2.3	0.0961	2.2	0.96	591.5	12.4	589.6	10.2	582.4	13.9	591.5	12.4	101.6
167	18360	3.1	16.6888	1.0	0.7956	2.8	0.0963	2.7	0.94	592.7	15.1	594.4	12.7	600.7	20.6	592.7	15.1	98.7
297	231069	14.5	16.4441	1.0	0.8089	2.7	0.0965	2.5	0.93	593.7	14.2	601.8	12.3	632.6	22.2	593.7	14.2	93.8
462	333887	18.9	16.6700	0.7	0.7979	2.3	0.0965	2.2	0.95	593.7	12.2	595.7	10.2	603.1	14.6	593.7	12.2	98.4
376	2589607	2.7	16.7116	0.7	0.7972	2.3	0.0966	2.2	0.95	594.6	12.3	595.2	10.3	597.7	15.9	594.6	12.3	99.5
806	21415	2.3	15.9291	1.3	0.8366	2.2	0.0967	1.8	0.81	594.8	10.3	617.3	10.4	700.7	27.9	594.8	10.3	84.9
109	15027	1.3	16.6429	1.0	0.8025	3.0	0.0969	2.8	0.94	596.0	16.1	598.2	13.5	606.6	21.8	596.0	16.1	98.2
117	119542	3.6	16.1489	0.6	0.8326	2.4	0.0975	2.4	0.97	599.8	13.5	615.0	11.3	671.5	13.2	599.8	13.5	89.3
312	82048	3.1	16.6149	0.8	0.8100	2.3	0.0976	2.1	0.93	600.4	12.2	602.5	10.4	610.3	18.0	600.4	12.2	98.4
273	29436	1.0	16.8671	0.9	0.7986	2.5	0.0977	2.3	0.93	600.9	13.2	596.0	11.1	577.6	19.2	600.9	13.2	104.0
107	43859	1.8	15.6148	1.0	0.8633	2.8	0.0978	2.6	0.94	601.3	15.0	631.9	13.2	743.0	21.0	601.3	15.0	80.9
136	28343	63.1	16.3446	1.2	0.8260	2.9	0.0979	2.7	0.91	602.2	15.4	611.4	13.5	645.7	25.9	602.2	15.4	93.3
615	308871	11.3	16.6944	0.6	0.8131	2.0	0.0984	1.9	0.95	605.3	11.1	604.2	9.1	600.0	12.9	605.3	11.1	100.9
107	34979	3.1	16.4086	1.1	0.8296	3.3	0.0987	3.2	0.95	607.0	18.4	613.4	15.4	637.3	23.2	607.0	18.4	95.2
389	2205975	3.6	16.1386	0.9	0.8442	3.1	0.0988	3.0	0.96	607.4	17.1	621.5	14.3	672.8	18.4	607.4	17.1	90.3
274	447263	5.0	16.4583	0.9	0.8307	2.5	0.0992	2.4	0.94	609.5	13.9	614.0	11.7	630.8	18.9	609.5	13.9	96.6
797	125461	12.2	16.5530	0.6	0.8270	1.7	0.0993	1.6	0.93	610.2	9.1	612.0	7.8	618.3	13.7	610.2	9.1	98.7
240	64133	3.2	16.5464	0.8	0.8371	2.1	0.1005	2.0	0.93	617.1	11.7	617.5	9.9	619.2	17.3	617.1	11.7	99.7
364	24094	3.2	16.6779	0.8	0.8307	2.4	0.1005	2.3	0.95	617.3	13.2	614.0	11.0	602.1	16.8	617.3	13.2	102.5
330	140469	3.2	16.4724	0.8	0.8473	2.0	0.1012	1.8	0.92	621.6	10.6	623.2	9.1	628.9	17.0	621.6	10.6	98.8
90	19664	2.3	16.5111	1.1	0.8500	3.1	0.1018	2.9	0.93	624.9	17.4	624.7	14.6	623.8	24.6	624.9	17.4	100.2
328	90310	4.2	16.5282	0.7	0.8494	2.1	0.1018	2.0	0.94	625.1	12.0	624.3	10.0	621.6	16.2	625.1	12.0	100.6
119	23405	1.8	16.6356	1.0	0.8525	2.5	0.1029	2.3	0.92	631.1	14.0	626.0	11.9	607.6	21.8	631.1	14.0	103.9
361	39334	2.2	16.6447	0.9	0.8532	2.7	0.1030	2.5	0.95	632.0	15.3	626.4	12.6	606.4	18.8	632.0	15.3	104.2
258	419055	6.6	16.4562	0.7	0.8665	2.3	0.1034	2.2	0.95	634.4	13.2	633.7	10.8	631.0	15.3	634.4	13.2	100.5
133	19140	3.6	16.4215	1.2	0.8759	3.1	0.1043	2.9	0.92	639.7	17.4	638.8	14.7	635.6	25.9	639.7	17.4	100.6
492	78233	5.7	16.5719	1.0	0.8687	1.9	0.1044	1.6	0.86	640.2	10.0	634.9	9.0	615.9	21.0	640.2	10.0	104.0
186	41671	2.9	16.3957	0.7	0.8802	2.4	0.1047	2.3	0.95	641.7	14.1	641.1	11.5	639.0	15.7	641.7	14.1	100.4
834	1854143	4.6	16.5196	0.6	0.8746	2.6	0.1048	2.5	0.97	642.4	15.6	638.0	12.4	622.7	13.3	642.4	15.6	103.2
82	25555	2.1	16.3309	1.0	0.8854	2.5	0.1049	2.3	0.92	642.9	14.2	643.9	12.1	647.5	21.9	642.9	14.2	99.3
83	9832	3.7	16.3401	1.1	0.8890	3.2	0.1054	3.0	0.94	645.7	18.5	645.9	15.3	646.3	23.5	645.7	18.5	99.9
163	119116	3.2	15.5189	1.3	0.9409	3.6	0.1059	3.4	0.94	648.9	20.8	673.4	17.7	756.0	26.9	648.9	20.8	85.8
104	162155	1.4	16.3959	0.8	0.8931	2.9	0.1062	2.7	0.96	650.7	16.9	648.0	13.7	638.9	18.0	650.7	16.9	101.8
103	28701	1.7	16.2070	0.9	0.9042	2.9	0.1063	2.8	0.96	651.1	17.4	653.9	14.2	663.8	18.6	651.1	17.4	98.1
75	20086	3.8	16.3654	1.3	0.9000	2.7	0.1068	2.4	0.89	654.3	15.0	651.7	13.1	642.9	27.2	654.3	15.0	101.8
150	33937	2.6	15.9223	1.1	0.9274	2.8	0.1071	2.6	0.91	655.9	15.9	666.3	13.6	701.7	24.0	655.9	15.9	93.5
239	179642	2.3	15.9623	0.8	0.9276	2.7	0.1074	2.5	0.96	657.6	15.9	666.4	13.0	696.3	16.5	657.6	15.9	94.4
310	265982	2.9	16.2579	0.5	0.9117	2.1	0.1075	2.1	0.97	658.2	13.0	658.0	10.4	657.1	10.9	658.2	13.0	100.2
174	24444	1.8	15.9443	0.8	0.9342	2.1	0.1080	1.9	0.92	661.3	12.1	669.9	10.3	698.7	17.0	661.3	12.1	94.6
150	51537	2.7	15.7490	0.9	0.9468	2.6	0.1081	2.4	0.93	662.0	15.0	676.4	12.6	724.9	19.3	662.0	15.0	91.3
51	9625	3.1	16.1223	1.3	0.9270	4.2	0.1084	4.0	0.95	663.4	25.0	666.1	20.4	675.0	28.5	663.4	25.0	98.3
160	33043	3.9	16.0679	0.7	0.9405	2.9	0.1096	2.8	0.97	670.5	17.9	673.2	14.2	682.2	14.3	670.5	17.9	98.3
67	12995	0.3	16.0767	1.5	0.9417	3.3	0.1098	2.9	0.89	671.6	18.7	673.8	16.2	681.0	31.5	671.6	18.7	98.6
424	192806	6.9	16.0730	0.8	0.9478	2.4	0.1105	2.2	0.93	675.6	14.1	677.0	11.7	681.5	18.0	675.6	14.1	99.1
233	127334	3.9	16.0132	0.8	0.9646	2.5	0.1120	2.3	0.94	684.5	15.2	685.7	12.4	689.5	18.0	684.5	15.2	99.3
145	36479	10.0	14.9381	0.9	1.0598	3.2	0.1148	3.1	0.96	700.7	20.6	733.7	16.9	836.0	19.4	700.7	20.6	83.8
175	40157	0.9	15.6959	0.8	1.0117	2.2	0.1152	2.0	0.92	702.7	13.5	709.7	11.2	732.1	17.7	702.7	13.5	96.0
245	49726	3.2	16.0070	0.6	0.9955	2.2	0.1156	2.1	0.96	705.0	14.2	701.5	11.2	690.3	12.6	705.0	14.2	102.1
174	32230	2.7	15.3489	0.8	1.0392	2.4	0.1157	2.3	0.94	705.7	15.0	723.5	12.4	779.2	17.1	705.7	15.0	90.6
415	66050	7.8	15.7996	1.0	1.0163	3.0	0.1165	2.8	0.94	710.2	18.6	712.1	15.1	718.1	21.6	710.2	18.6	98.9
186	1481008	5.1	14.4486	0.9	1.1691	3.1	0.1225	3.0	0.96	745.0	21.0	786.2	17.0	905.0	17.9	745.0	21.0	82.3
162	56765	2.0	14.8411	0.8	1.1795	2.5	0.1270	2.4	0.95	770.5	17.6	791.1	14.0	849.6	16.2	770.5	17.6	90.7
543	72426	37.5	14.9231	0.7	1.1777	2.5	0.1275	2.4	0.96	773.4	17.4	790.2	13.6	838.1	14.3	773.4	17.4	92.3
103	27229	2.5	14.8729	0.9	1.1860	3.0	0.1279	2.8	0.96	776.1	20.7	794.1	16.3	845.1	17.9	776.1	20.7	91.8
55	25942	3.5	14.5637	1.4	1.2164	3.4	0.1285	3.1	0.91	779.2	22.8	808.1	18.9	888.7	28.5	779.2	22.8	87.7
215	239454	9.0	15.1581	0.9	1.1883	2.7	0.1306	2.5	0.95	791.5	18.9	795.2	14.8	805.4	18.1	791.5	18.9	98.3
269	34577	3.1	15.0260	0.7	1.2094	2.3	0.1318	2.2	0.95	798.1	16.2	804.9	12.7	823.8	15.6	798.1	16.2	96.9
541	1207836	21.4	14.5746	0.8	1.2547	3.2	0.1326	3.1	0.96	802.8	23.3	825.5	18.1	887.1	17.4	802.8	23.3	90.5
72	42094	3.2	14.1781	0.9	1.2955	3.6	0.1332	3.5	0.97	806.2	26.7	843.7	20.9	943.9	19.4	806.2	26.7	85.4
144	47077	6.1	14.1618	0.8	1.3466	2.8	0.1383	2.7	0.96	835.1	20.8	866.1	16.2	946.2	16.6	835.1	20.8	88.3
193	505049	10.2	14.4536	1.5	1.3242	8.7	0.1388	8.6	0.98	837.9	67.2	856.3	50.3	904.3	31.2	837.9	67.2	92.7
252	150861	5.0	14.2731	0.8	1.3952	2.4	0.1444	2.3	0.95	869.7	18.4	886.9	14.1	930.2	15.5	869.7	18.4	93.5

292	95999	2.6	14.2803	0.8	1.4068	2.3	0.1457	2.1	0.94	876.8	17.6	891.8	13.6	929.1	16.6	929.1	16.6	94.4
44	8998	3.0	14.0563	1.3	1.3997	3.2	0.1427	2.9	0.91	859.9	23.1	888.8	18.7	961.5	27.1	961.5	27.1	89.4
71	29563	1.9	14.0184	1.5	1.4154	3.7	0.1439	3.4	0.92	866.7	27.6	895.4	22.1	967.0	29.9	967.0	29.9	89.6
394	44421	5.8	13.9655	0.8	1.5225	2.1	0.1542	1.9	0.92	924.5	16.5	939.5	12.8	974.7	16.8	974.7	16.8	94.8
359	2950169	12.8	13.8388	0.7	1.5714	2.5	0.1577	2.4	0.96	944.1	21.0	959.0	15.4	993.3	14.0	993.3	14.0	95.0
182	126250	5.2	13.7849	0.7	1.6612	2.6	0.1661	2.5	0.96	990.5	23.1	993.8	16.6	1001.2	14.4	1001.2	14.4	98.9
195	135441	2.1	13.7418	0.7	1.5060	2.7	0.1501	2.6	0.97	901.5	22.3	932.8	16.7	1007.6	14.3	1007.6	14.3	89.5
220	117477	3.7	13.7329	0.7	1.6141	2.6	0.1608	2.5	0.96	961.0	22.4	975.7	16.4	1008.9	14.6	1008.9	14.6	95.3
203	107306	2.0	13.7131	0.9	1.7066	1.9	0.1697	1.7	0.87	1010.7	15.5	1011.0	12.1	1011.8	18.6	1011.8	18.6	99.9
226	85473	3.0	13.6514	0.8	1.6275	2.5	0.1611	2.4	0.95	963.1	21.6	980.9	15.9	1020.9	15.4	1020.9	15.4	94.3
159	133214	5.7	13.6495	1.0	1.7988	3.3	0.1781	3.2	0.96	1056.5	30.7	1045.0	21.5	1021.2	19.3	1021.2	19.3	103.5
48	151944	4.1	13.6442	1.1	1.6808	3.4	0.1663	3.2	0.94	991.8	29.7	1001.3	21.8	1022.0	22.8	1022.0	22.8	97.0
242	70335	3.1	13.6417	0.8	1.6479	2.4	0.1630	2.2	0.94	973.7	20.2	988.8	15.0	1022.4	15.8	1022.4	15.8	95.2
79	72018	2.2	13.6393	0.9	1.6226	3.4	0.1605	3.3	0.97	959.6	29.6	979.0	21.6	1022.7	17.8	1022.7	17.8	93.8
362	1414015	3.5	13.6356	0.6	1.7111	1.8	0.1692	1.7	0.94	1007.8	16.0	1012.7	11.7	1023.3	13.0	1023.3	13.0	98.5
248	69321	5.4	13.6314	0.7	1.7569	2.2	0.1737	2.0	0.94	1032.4	19.3	1029.7	14.0	1023.9	15.1	1023.9	15.1	100.8
343	88574	5.6	13.6246	0.8	1.6801	2.2	0.1660	2.1	0.94	990.1	19.0	1001.0	14.1	1024.9	15.7	1024.9	15.7	96.6
287	189733	4.9	13.6102	0.8	1.7663	2.3	0.1744	2.2	0.94	1036.1	20.7	1033.2	14.9	1027.0	15.3	1027.0	15.3	100.9
211	80467	2.6	13.6064	0.9	1.7000	2.4	0.1678	2.3	0.94	999.8	20.8	1008.5	15.4	1027.6	17.2	1027.6	17.2	97.3
256	180520	4.0	13.5905	0.7	1.7336	2.2	0.1709	2.1	0.95	1017.0	19.6	1021.1	14.1	1030.0	13.3	1030.0	13.3	98.7
32	6635	4.9	13.5777	1.2	1.7461	4.0	0.1719	3.8	0.95	1022.8	35.8	1025.7	25.7	1031.9	24.5	1031.9	24.5	99.1
90	26115	3.4	13.5771	1.3	1.8001	6.8	0.1773	6.6	0.98	1051.9	64.4	1045.5	44.2	1032.0	27.2	1032.0	27.2	101.9
185	56403	4.1	13.5766	0.8	1.7372	2.7	0.1711	2.6	0.95	1017.9	24.0	1022.4	17.2	1032.0	16.1	1032.0	16.1	98.6
138	276021	2.3	13.5684	0.8	1.7524	2.4	0.1725	2.3	0.94	1025.6	21.3	1028.1	15.4	1033.3	16.0	1033.3	16.0	99.3
181	331118	2.7	13.5600	0.7	1.7551	2.4	0.1726	2.3	0.96	1026.5	22.0	1029.1	15.6	1034.5	13.5	1034.5	13.5	99.2
88	24730	2.9	13.5364	1.3	1.5818	3.5	0.1553	3.3	0.94	930.6	28.6	963.1	22.0	1038.0	25.3	1038.0	25.3	89.6
49	12226	2.4	13.5361	1.2	1.4953	4.5	0.1468	4.3	0.97	883.0	35.5	928.5	27.1	1038.1	23.4	1038.1	23.4	85.1
180	70821	3.0	13.5243	0.7	1.7360	2.1	0.1703	2.0	0.95	1013.7	19.0	1022.0	13.8	1039.8	14.0	1039.8	14.0	97.5
287	340658	3.7	13.5189	0.7	1.7713	2.2	0.1737	2.1	0.95	1032.3	19.7	1035.0	14.1	1040.6	13.7	1040.6	13.7	99.2
333	497028	4.4	13.5099	0.6	1.7453	2.3	0.1710	2.3	0.96	1017.7	21.3	1025.4	15.1	1042.0	12.7	1042.0	12.7	97.7
244	342093	2.1	13.5099	0.8	1.8153	2.6	0.1779	2.5	0.95	1055.3	24.1	1051.0	17.0	1042.0	15.8	1042.0	15.8	101.3
540	628851	4.7	13.5048	0.7	1.8111	2.0	0.1774	1.8	0.93	1052.7	17.7	1049.5	12.9	1042.7	15.1	1042.7	15.1	101.0
417	204169	3.5	13.4957	0.6	1.8224	1.9	0.1784	1.8	0.95	1058.1	17.8	1053.5	12.5	1044.1	11.8	1044.1	11.8	101.3
239	192078	5.5	13.4948	0.7	1.6559	2.4	0.1621	2.3	0.95	968.3	20.4	991.8	15.1	1044.2	14.6	1044.2	14.6	92.7
134	58125	6.2	13.4560	1.0	1.8507	3.0	0.1806	2.8	0.95	1070.3	27.8	1063.7	19.7	1050.1	19.7	1050.1	19.7	101.9
130	114878	3.9	13.4537	0.8	1.7550	2.2	0.1712	2.1	0.93	1019.0	19.6	1029.0	14.4	1050.4	16.2	1050.4	16.2	97.0
143	43081	3.1	13.4500	0.8	1.7687	2.6	0.1725	2.5	0.95	1026.1	23.8	1034.1	17.1	1051.0	16.1	1051.0	16.1	97.6
100	34975	1.4	13.4472	0.9	1.7775	3.5	0.1734	3.4	0.96	1030.6	32.1	1037.3	22.8	1051.4	19.0	1051.4	19.0	98.0
164	1867414	1.8	13.4386	0.8	1.7859	2.6	0.1741	2.4	0.95	1034.4	23.2	1040.3	16.6	1052.7	16.0	1052.7	16.0	98.3
340	381256	3.9	13.4314	0.8	1.8338	2.5	0.1786	2.4	0.95	1059.5	23.4	1057.6	16.6	1053.8	15.6	1053.8	15.6	100.5
173	51778	4.9	13.4300	0.7	1.7817	2.4	0.1735	2.3	0.96	1031.6	22.3	1038.8	15.8	1054.0	13.4	1054.0	13.4	97.9
37	16487	1.6	13.4078	1.1	1.8138	4.1	0.1764	3.9	0.97	1047.1	37.9	1050.4	26.6	1057.3	21.4	1057.3	21.4	99.0
167	56001	3.5	13.4062	0.9	1.7865	2.3	0.1737	2.1	0.92	1032.5	20.4	1040.6	15.2	1057.6	18.9	1057.6	18.9	97.6
233	41596	4.1	13.3860	0.9	1.8629	2.2	0.1809	2.0	0.91	1071.7	19.6	1068.0	14.4	1060.6	18.1	1060.6	18.1	101.0
234	190239	4.1	13.3595	0.9	1.8769	2.6	0.1819	2.5	0.94	1077.1	24.4	1073.0	17.4	1064.6	18.2	1064.6	18.2	101.2
149	70741	2.1	13.3421	0.9	1.8852	2.8	0.1824	2.7	0.95	1080.2	26.5	1075.9	18.6	1067.2	18.1	1067.2	18.1	101.2
48	30901	2.4	13.3314	1.0	1.7153	4.2	0.1659	4.1	0.97	989.2	37.7	1014.3	27.2	1068.8	20.8	1068.8	20.8	92.6
268	79329	3.6	13.3312	0.7	1.8676	2.0	0.1806	1.9	0.94	1070.1	18.8	1069.7	13.5	1068.8	14.3	1068.8	14.3	100.1
182	44940	1.6	13.3232	0.9	1.8728	2.4	0.1810	2.2	0.93	1072.2	21.7	1071.5	15.7	1070.1	17.6	1070.1	17.6	100.2
80	59104	2.8	13.3218	0.7	1.8757	2.7	0.1812	2.6	0.96	1073.7	25.7	1072.5	17.9	1070.3	14.4	1070.3	14.4	100.3
194	130602	5.2	13.2862	0.7	1.8308	2.2	0.1764	2.1	0.94	1047.3	20.2	1056.5	14.6	1075.6	14.8	1075.6	14.8	97.4
283	1361451	2.4	13.2862	0.7	1.8604	2.1	0.1793	1.9	0.94	1063.0	19.0	1067.1	13.6	1075.6	13.8	1075.6	13.8	98.8
123	338861	2.7	13.2857	0.8	1.9109	2.9	0.1841	2.8	0.96	1089.5	28.3	1084.9	19.6	1075.7	16.3	1075.7	16.3	101.3
523	157552	2.1	13.2779	0.8	1.9026	2.6	0.1832	2.5	0.95	1084.5	24.6	1082.0	17.2	1076.9	15.7	1076.9	15.7	100.7
235	43015	4.5	13.2654	0.8	1.9140	2.0	0.1841	1.9	0.92	1089.6	18.7	1086.0	13.5	1078.8	16.2	1078.8	16.2	101.0
39	80921	2.2	13.2575	0.9	1.8354	3.4	0.1765	3.3	0.97	1047.7	31.5	1058.2	22.2	1079.9	17.4	1079.9	17.4	97.0
59	13691	1.5	13.2286	1.1	1.8473	3.9	0.1772	3.8	0.96	1051.9	36.6	1062.5	25.9	1084.3	22.5	1084.3	22.5	97.0
198	29040	2.5	13.2192	0.7	1.8353	2.4	0.1760	2.3	0.95	1044.9	22.5	1058.2	16.1	1085.7	14.7	1085.7	14.7	96.2
123	54861	3.2	13.1891	0.8	1.8887	2.6	0.1807	2.5	0.95	1070.6	24.6	1077.1	17.4	1090.3	15.8	1090.3	15.8	98.2
326	111682	5.1	13.1878	0.7	1.9479	2.1	0.1863	2.0	0.95	1101.4	20.7	1097.7	14.4	1090.5	13.4	1090.5	13.4	101.0
247	136089	4.7	13.1718	0.7	1.9120	2.4	0.1827	2.2	0.95	1081.5	22.2	1085.3	15.7	1092.9	14.7	1092.9	14.7	99.0
70	47364	2.2	13.1071	0.9	1.9639	3.5	0.1867	3.4	0.96	1103.4	34.4	1103.2	23.7	1102.8	19.0	1102.8	19.0	100.1
267	129716	3.5	13.0906	0.7	1.9185	2.1	0.1821	2.0	0.94	1078.7	19.5	1087.6	14.0	1105.4	14.5	1105.4	14.5	97.6
70	73381	1.6	13.0883	0.8	2.0348	3.3	0.1932	3.2	0.97	1138.4	33.3	1127.2	22.5	1105.7	16.6	1105.7	16.6	103.0
154	690495	2.9	13.0834	0.7	1.8948	2.6	0.1798	2.5	0.96	1065.9	25.0	1079.3	17.5	1106.4	13.9	1106.4	13.9	96.3
80	30828	3.5	13.0016	0.9	1.9469	3.0	0.1836	2.9	0.96	1086.5	28.5	1097.4	20.0	1119.0	17.1	1119.0	17.1	97.1
121	138972	3.8	12.9963	0.7	1.9299	3.0	0.1819	2.9	0.97	1077.4	29.0	1091.5	20.2	1119.8	14.7	1119.8	14.7	96.2
33	12011	2.1	12.9543	1.2	1.8473	3.7	0.1736	3.5	0.95	1031.7	33.5	1062.5	24.5	1126.2	23.9	1126.2	23.9	91.6
32	24617	2.6	12.9506	1.2	1.9028	3.8	0.1787	3.6	0.95	1060.0	35.4	1082.1	25.4	1126.8	23.5	1126.8	23.5	94.1
142	88473	3.6	12.7441	0.8	2.1507	2.3	0.1988	2.1	0.94	1168.8	22.8	1165.3	15.7	1158.7	15.1	1158.7	15.1	100.9
155	405993	2.4	12.5232	0.7	2.1474	2.5	0.1950	2.4	0.96	1148.6	25.8	1164.2	17.6	1193.3	13.2	1193.3	13.2	96.3
43	37162	6.1	12.3241	1.3	2.2651	3.9	0.2025	3.7	0.95	1188.5	40.6	1201.5	27.8	1224.9	24.7	1224.9	24.7	97.0

69	83773	2.2	12.2539	0.9	2.4375	3.1	0.2166	3.0	0.96	1264.1	34.0	1253.7	22.3	1236.1	17.5	1236.1	17.5	102.3
52	128320	1.6	12.2384	1.0	2.3301	3.1	0.2068	2.9	0.94	1211.9	32.4	1221.5	22.1	1238.6	20.4	1238.6	20.4	97.8
104	78020	2.1	12.2283	0.9	2.3050	3.4	0.2044	3.2	0.97	1199.1	35.5	1213.8	23.8	1240.2	17.0	1240.2	17.0	96.7
79	193396	5.0	11.9597	1.0	1.9973	3.8	0.1732	3.7	0.97	1030.0	35.2	1114.6	25.9	1283.6	19.4	1283.6	19.4	80.2
119	29550	2.6	11.2485	0.7	2.9888	2.7	0.2438	2.6	0.97	1406.6	32.8	1404.8	20.4	1402.0	13.0	1402.0	13.0	100.3
103	213897	2.4	11.0405	0.8	3.2105	2.6	0.2571	2.4	0.95	1474.8	32.1	1459.7	19.8	1437.7	15.3	1437.7	15.3	102.6
63	32769	0.8	11.0091	0.9	3.0586	2.8	0.2442	2.6	0.95	1408.6	33.2	1422.4	21.1	1443.1	16.4	1443.1	16.4	97.6
133	26902	2.8	9.8524	1.0	3.9971	2.8	0.2856	2.6	0.94	1619.6	37.8	1633.6	22.8	1651.7	17.8	1651.7	17.8	98.1
120	100279	2.8	9.7727	0.8	4.0573	2.8	0.2876	2.7	0.96	1629.4	38.8	1645.8	22.8	1666.7	14.1	1666.7	14.1	97.8
453	538990	9.1	9.4684	0.8	4.1118	2.4	0.2824	2.3	0.95	1603.3	33.0	1656.6	20.0	1725.0	14.0	1725.0	14.0	92.9
203	71096	2.4	9.4041	0.9	4.1705	2.3	0.2844	2.1	0.92	1613.7	30.4	1668.2	19.1	1737.5	17.1	1737.5	17.1	92.9
196	701455	1.9	9.2935	0.6	4.6245	2.5	0.3117	2.4	0.97	1749.1	36.5	1753.7	20.5	1759.2	10.3	1759.2	10.3	99.4
242	1339436	2.5	9.2699	0.5	4.4724	2.5	0.3007	2.5	0.98	1694.7	36.6	1725.9	20.8	1763.8	9.0	1763.8	9.0	96.1
135	50685	1.2	9.2130	0.8	4.2182	2.8	0.2819	2.7	0.96	1600.7	38.2	1677.6	23.1	1775.1	14.6	1775.1	14.6	90.2
90	50725	1.7	9.2109	0.7	4.8314	2.9	0.3228	2.8	0.97	1803.2	44.4	1790.4	24.4	1775.5	12.3	1775.5	12.3	101.6
177	158437	3.4	9.1725	0.6	4.6683	2.8	0.3106	2.7	0.97	1743.5	41.8	1761.6	23.5	1783.1	11.4	1783.1	11.4	97.8
138	68383	3.0	9.1503	0.8	4.7956	2.4	0.3183	2.3	0.95	1781.2	35.3	1784.1	20.1	1787.5	13.9	1787.5	13.9	99.6
112	669107	0.6	8.7761	0.9	5.2353	3.0	0.3332	2.9	0.96	1854.0	46.2	1858.4	25.6	1863.3	15.8	1863.3	15.8	99.5
81	36768	2.5	8.7699	0.7	5.2242	4.0	0.3323	3.9	0.98	1849.4	63.4	1856.6	34.2	1864.5	12.8	1864.5	12.8	99.2
92	648873	1.7	8.7583	0.9	5.2105	2.8	0.3310	2.6	0.94	1843.1	42.0	1854.3	23.6	1866.9	16.4	1866.9	16.4	98.7
392	220330	2.1	7.5163	0.7	7.0186	2.6	0.3826	2.5	0.96	2088.5	45.4	2113.8	23.5	2138.5	12.1	2138.5	12.1	97.7
551	178217	4.0	5.5904	0.8	10.5020	2.3	0.4258	2.2	0.94	2286.8	41.9	2480.1	21.5	2642.5	13.5	2642.5	13.5	86.5
206	99417	1.2	5.4032	0.7	13.0155	2.4	0.5100	2.3	0.95	2656.8	50.4	2680.8	23.0	2698.9	12.4	2698.9	12.4	98.4
147	270624	2.7	5.3782	0.8	12.4365	2.7	0.4851	2.5	0.95	2549.5	53.3	2637.9	25.1	2706.5	13.7	2706.5	13.7	94.2
131	207692	2.7	5.1295	0.8	14.2444	2.9	0.5299	2.8	0.97	2741.1	62.9	2766.1	27.7	2784.4	12.4	2784.4	12.4	98.4
52	152992	2.4	4.1130	0.7	20.3416	3.5	0.6068	3.4	0.98	3057.2	83.8	3107.7	34.1	3140.6	11.8	3140.6	11.8	97.3

Academy Glacier Till

LIC

					Isotope ratios							Apparent ages (Ma)						
U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
304	19129	1.3	17.1420	1.1	0.6307	3.1	0.0784	2.9	0.94	486.7	13.8	496.6	12.3	542.4	23.6	486.7	13.8	89.7
346	18151	2.6	17.5015	1.1	0.6182	2.6	0.0785	2.4	0.90	487.0	11.1	488.7	10.2	496.9	25.3	487.0	11.1	98.0
511	252353	2.5	17.2191	0.8	0.6314	2.1	0.0789	1.9	0.93	489.3	9.0	497.0	8.1	532.6	16.6	489.3	9.0	91.9
358	78937	1.2	17.5162	0.8	0.6211	2.7	0.0789	2.6	0.96	489.6	12.1	490.5	10.4	495.0	17.4	489.6	12.1	98.9
517	308299	1.6	17.5468	0.9	0.6207	2.9	0.0790	2.7	0.95	490.1	12.9	490.3	11.1	491.1	19.2	490.1	12.9	99.8
397	30896	1.7	16.9087	1.1	0.6445	2.8	0.0790	2.6	0.92	490.3	12.3	505.1	11.2	572.3	23.5	490.3	12.3	85.7
260	89952	1.8	17.3626	0.9	0.6311	2.3	0.0795	2.1	0.91	493.0	9.8	496.8	8.9	514.4	20.8	493.0	9.8	95.8
244	784398	1.4	17.2440	1.2	0.6356	2.8	0.0795	2.6	0.91	493.1	12.3	499.6	11.2	529.4	25.5	493.1	12.3	93.1
528	851101	3.1	17.3932	0.8	0.6334	2.3	0.0799	2.1	0.93	495.5	10.0	498.2	8.9	510.5	18.4	495.5	10.0	97.1
712	124904	4.7	17.4194	0.9	0.6328	2.7	0.0799	2.5	0.94	495.8	11.9	497.8	10.5	507.2	20.6	495.8	11.9	97.8
377	46460	1.7	17.4842	0.7	0.6311	2.4	0.0800	2.3	0.95	496.3	11.0	496.8	9.5	499.0	16.1	496.3	11.0	99.5
110	7362	2.1	17.5925	1.4	0.6303	3.8	0.0804	3.5	0.93	498.6	16.8	496.3	14.8	485.4	30.1	498.6	16.8	102.7
596	22226	1.4	17.6441	0.9	0.6285	2.3	0.0804	2.1	0.93	498.7	10.2	495.2	9.0	478.9	18.9	498.7	10.2	104.1
388	204142	2.1	17.3711	0.8	0.6389	2.5	0.0805	2.4	0.94	499.1	11.4	501.7	9.9	513.3	18.1	499.1	11.4	97.2
387	3391294	2.1	17.1691	1.0	0.6480	2.6	0.0807	2.3	0.92	500.2	11.3	507.2	10.2	538.9	22.3	500.2	11.3	92.8
434	307125	2.2	17.3295	0.9	0.6448	2.6	0.0810	2.4	0.94	502.3	11.7	505.3	10.3	518.6	19.3	502.3	11.7	96.9
283	100142	1.8	17.1642	0.9	0.6517	3.1	0.0811	3.0	0.95	502.8	14.4	509.5	12.5	539.6	20.8	502.8	14.4	93.2
342	57847	1.5	17.4514	0.9	0.6412	2.7	0.0812	2.6	0.95	503.1	12.4	503.1	10.8	503.2	19.4	503.1	12.4	100.0
786	76412	2.8	17.4616	0.8	0.6420	2.1	0.0813	2.0	0.92	503.9	9.5	503.6	8.5	501.9	18.4	503.9	9.5	100.4
355	47814	2.3	17.1831	0.9	0.6543	3.2	0.0815	3.1	0.96	505.3	15.2	511.1	13.0	537.2	18.9	505.3	15.2	94.1
372	243685	2.6	17.2390	0.9	0.6533	2.5	0.0817	2.4	0.94	506.2	11.6	510.5	10.2	530.1	18.7	506.2	11.6	95.5
235	23682	2.3	17.3855	0.9	0.6511	3.0	0.0821	2.8	0.95	508.7	13.8	509.2	11.9	511.5	20.6	508.7	13.8	99.4
630	135806	2.6	17.5311	0.8	0.6471	2.4	0.0823	2.2	0.94	509.7	10.8	506.7	9.4	493.1	18.3	509.7	10.8	103.4
642	60027	3.4	17.1107	0.7	0.6630	2.9	0.0823	2.8	0.97	509.7	13.8	516.5	11.8	546.4	15.3	509.7	13.8	93.3
69	8145	2.0	17.1110	1.3	0.6631	3.6	0.0823	3.4	0.93	509.8	16.7	516.5	14.8	546.3	28.3	509.8	16.7	93.3
437	110878	2.0	17.2773	1.0	0.6567	2.7	0.0823	2.6	0.93	509.8	12.6	512.6	11.1	525.2	21.5	509.8	12.6	97.1
362	74351	3.1	17.1914	0.8	0.6606	2.6	0.0824	2.5	0.95	510.2	12.2	515.0	10.6	536.1	17.8	510.2	12.2	95.2
415	212831	2.3	17.5806	0.9	0.6467	3.0	0.0825	2.9	0.95	510.8	14.0	506.4	12.0	486.9	20.0	510.8	14.0	104.9
178	20735	1.8	17.1696	1.0	0.6630	3.4	0.0826	3.2	0.95	511.4	15.8	516.5	13.6	538.9	22.3	511.4	15.8	94.9
263	705140	1.8	16.9502	1.1	0.6723	2.4	0.0826	2.2	0.89	511.9	10.6	522.1	9.9	567.0	24.6	511.9	10.6	90.3
301	20896	2.4	17.2277	1.1	0.6616	2.2	0.0827	1.9	0.87	512.0	9.3	515.6	8.8	531.5	23.8	512.0	9.3	96.3
336	32387	1.3	17.4217	0.9	0.6586	2.8	0.0832	2.7	0.95	515.3	13.2	513.8	11.4	506.9	20.2	515.3	13.2	101.7
396	63365	2.6	17.1367	1.0	0.6704	2.8	0.0833	2.6	0.94	515.9	12.9	521.0	11.3	543.1	20.9	515.9	12.9	95.0
227	61456	2.6	17.1899	0.8	0.6686	2.8	0.0834	2.7	0.95	516.1	13.5	519.8	11.6	536.3	18.5	516.1	13.5	96.2
217	30316	1.9	17.2744	1.0	0.6655	2.7	0.0834	2.5	0.92	516.3	12.3	518.0	10.9	525.5	22.4	516.3	12.3	98.2
332	30615	2.3	17.4761	1.0	0.6590	2.7	0.0835	2.5	0.93	517.2	12.7	514.0	11.0	500.1	22.0	517.2	12.7	103.4
169	12034	2.9	17.0878	1.1	0.6744	3.7	0.0836	3.6	0.95	517.4	17.7	523.4	15.3	549.3	25.1	517.4	17.7	94.2
24	16977	1.8	16.5404	1.8	0.6991	5.3	0.0839	5.1	0.94	519.1	25.2	538.2	22.4	620.0	38.1	519.1	25.2	83.7
305	203430	2.1	17.1431	1.1	0.6748	2.8	0.0839	2.6	0.93	519.3	13.0	523.6	11.5	542.3	23.4	519.3	13.0	95.8
227	15276	2.1	17.3851	1.2	0.6661	2.9	0.0840	2.6	0.90	519.9	12.9	518.4	11.6	511.6	26.9	519.9	12.9	101.6
108	32948	6.1	17.1946	1.4	0.6748	4.2	0.0842	3.9	0.94	520.9	19.7	523.6	17.0	535.7	30.4	520.9	19.7	97.2
311	141792	5.1	17.2583	1.0	0.6740	3.1	0.0844	2.9	0.95	522.1	14.5	523.1	12.5	527.6	21.0	522.1	14.5	99.0
138	57364	1.9	17.4145	1.3	0.6687	3.3	0.0845	3.1	0.92	522.7	15.5	520.0	13.6	507.8	28.2	522.7	15.5	102.9
158	26946	1.9	17.0157	1.0	0.6882	3.6	0.0849	3.4	0.96	525.5	17.2	531.7	14.7	558.6	22.4	525.5	17.2	94.1
348	124360	12.4	16.8676	1.0	0.6981	2.5	0.0854	2.3	0.92	528.3	11.5	537.7	10.3	577.6	20.9	528.3	11.5	91.5
342	112453	4.3	16.9374	0.9	0.6954	2.7	0.0854	2.6	0.94	528.5	13.0	536.1	11.3	568.6	19.9	528.5	13.0	92.9
224	27902	2.0	16.8876	1.2	0.6976	2.7	0.0854	2.5	0.90	528.5	12.5	537.3	11.4	575.0	26.4	528.5	12.5	91.9
142	19733	2.7	17.3171	1.0	0.6844	2.8	0.0860	2.6	0.94	531.6	13.5	529.4	11.7	520.1	21.7	531.6	13.5	102.2
686	188053	35.7	17.1969	0.9	0.6902	2.4	0.0861	2.2	0.93	532.3	11.2	532.9	9.8	535.4	19.3	532.3	11.2	99.4
165	22634	59.7	17.3587	1.3	0.6901	3.6	0.0869	3.3	0.93	537.1	17.0	532.9	14.8	514.9	29.3	537.1	17.0	104.3
640	169841	2.8	17.1840	0.9	0.7006	2.2	0.0873	2.0	0.92	539.6	10.5	539.1	9.3	537.0	19.0	539.6	10.5	100.5
291	58545	4.1	17.2891	0.8	0.6968	3.2	0.0874	3.1	0.97	540.0	15.9	536.9	13.3	523.7	18.2	540.0	15.9	103.1
270	18807	2.9	17.1036	1.0	0.7067	2.8	0.0877	2.6	0.93	541.7	13.4	542.8	11.6	547.3	21.6	541.7	13.4	99.0
97	119049	52.8	16.7967	1.4	0.7207	3.0	0.0878	2.7	0.88	542.5	13.9	551.1	12.9	586.7	30.8	542.5	13.9	92.5
368	144742	3.2	16.9531	0.8	0.7157	2.7	0.0880	2.5	0.95	543.7	13.2	548.1	11.2	566.6	17.8	543.7	13.2	96.0
271	142944	31.1	16.6093	1.2	0.7319	5.8	0.0882	5.7	0.98	544.7	29.7	557.7	25.0	611.0	25.8	544.7	29.7	89.1
119	15523	2.9	17.2685	1.1	0.7041	3.0	0.0882	2.8	0.94	544.8	14.7	541.2	12.7	526.3	23.3	544.8	14.7	103.5
183	41124	8.9	17.1074	0.9	0.7126	3.5	0.0884	3.4	0.97	546.1	17.9	546.3	14.9	546.8	20.2	546.1	17.9	99.9

325	33419	1.9	17.0905	0.8	0.7145	2.1	0.0886	2.0	0.93	547.1	10.3	547.4	9.0	549.0	17.3	547.1	10.3	99.6
535	405776	4.5	16.8652	0.8	0.7279	2.2	0.0890	2.1	0.94	549.8	11.1	555.3	9.6	577.9	17.2	549.8	11.1	95.1
91	11098	2.0	17.0283	1.4	0.7220	3.1	0.0892	2.7	0.89	550.6	14.4	551.9	13.1	556.9	30.9	550.6	14.4	98.9
687	165976	37.6	17.0280	0.9	0.7231	2.7	0.0893	2.5	0.95	551.4	13.4	552.5	11.5	557.0	19.0	551.4	13.4	99.0
290	64501	3.5	16.9554	0.9	0.7275	3.5	0.0895	3.4	0.96	552.4	18.1	555.1	15.1	566.3	20.4	552.4	18.1	97.5
503	43499	2.2	16.8768	0.8	0.7335	2.4	0.0898	2.3	0.95	554.2	12.2	558.6	10.4	576.4	16.7	554.2	12.2	96.2
37	64075	1.8	16.7561	1.9	0.7439	5.6	0.0904	5.3	0.94	557.9	28.4	564.7	24.5	592.0	41.0	557.9	28.4	94.2
264	200705	1.4	16.4764	0.7	0.7577	2.5	0.0905	2.4	0.96	558.8	12.6	572.7	10.7	628.3	14.2	558.8	12.6	88.9
261	21337	3.6	16.9034	0.9	0.7419	2.7	0.0910	2.6	0.95	561.2	13.8	563.5	11.8	573.0	19.2	561.2	13.8	97.9
225	602568	1.4	16.6757	1.0	0.7542	3.0	0.0912	2.9	0.94	562.7	15.4	570.7	13.2	602.4	21.4	562.7	15.4	93.4
446	16889	1.8	16.6126	1.1	0.7578	2.8	0.0913	2.6	0.92	563.3	14.1	572.8	12.5	610.6	24.3	563.3	14.1	92.2
394	83349	20.9	16.9184	0.8	0.7472	2.6	0.0917	2.5	0.96	565.5	13.5	566.6	11.3	571.0	16.4	565.5	13.5	99.0
175	17744	0.6	16.9157	1.1	0.7519	2.7	0.0922	2.5	0.92	568.8	13.6	569.3	11.8	571.4	23.3	568.8	13.6	99.5
89	44978	1.9	16.9335	1.2	0.7515	3.0	0.0923	2.8	0.92	569.1	15.3	569.1	13.3	569.1	25.8	569.1	15.3	100.0
359	32965	2.4	16.8473	0.9	0.7569	2.5	0.0925	2.4	0.93	570.2	13.0	572.2	11.1	580.2	19.6	570.2	13.0	98.3
896	704912	5.7	16.6509	0.7	0.7658	2.2	0.0925	2.0	0.94	570.2	11.0	577.4	9.5	605.6	16.0	570.2	11.0	94.2
550	36026	50.1	17.1283	0.9	0.7447	2.8	0.0925	2.6	0.95	570.3	14.4	565.1	12.0	544.2	19.4	570.3	14.4	104.8
765	543459	138.8	16.7896	0.8	0.7606	2.5	0.0926	2.4	0.95	571.0	13.1	574.3	11.0	587.7	17.2	571.0	13.1	97.2
212	94225	3.4	16.6867	1.1	0.7716	3.2	0.0934	3.0	0.93	575.5	16.3	580.7	14.0	601.0	24.6	575.5	16.3	95.8
1707	90872	7.7	16.9562	0.8	0.7661	2.2	0.0942	2.1	0.93	580.4	11.6	577.5	9.9	566.2	17.9	580.4	11.6	102.5
173	61028	2.0	16.6618	1.0	0.7903	2.3	0.0955	2.1	0.90	588.0	11.7	591.4	10.4	604.2	22.1	588.0	11.7	97.3
64	13718	0.9	16.0717	1.7	0.8210	4.4	0.0957	4.1	0.93	589.1	23.1	608.6	20.3	681.7	35.9	589.1	23.1	86.4
300	93194	4.1	16.5556	0.9	0.7979	2.8	0.0958	2.6	0.94	589.8	14.7	595.7	12.4	618.0	19.5	589.8	14.7	95.4
588	1046365	47.5	16.7091	0.8	0.7942	2.4	0.0962	2.3	0.94	592.4	12.9	593.5	10.9	598.1	17.2	592.4	12.9	99.0
118	53245	1.3	16.3218	1.2	0.8135	3.6	0.0963	3.3	0.94	592.7	18.9	604.4	16.3	648.6	26.7	592.7	18.9	91.4
366	34485	1.2	16.8331	0.9	0.7960	2.6	0.0972	2.5	0.93	597.9	14.1	594.6	11.9	582.0	20.6	597.9	14.1	102.7
196	8827	1.3	16.2285	1.5	0.8280	3.2	0.0975	2.8	0.88	599.5	15.9	612.5	14.5	660.9	32.0	599.5	15.9	90.7
247	64720	1.8	16.8718	0.9	0.7978	3.1	0.0976	3.0	0.96	600.5	17.1	595.6	14.0	577.1	19.1	600.5	17.1	104.1
858	372798	3.3	16.6055	0.8	0.8111	2.8	0.0977	2.6	0.96	600.8	15.1	603.0	12.5	611.5	17.5	600.8	15.1	98.2
242	375424	3.2	16.3988	1.0	0.8215	2.4	0.0977	2.2	0.91	600.9	12.5	608.9	11.0	638.6	22.0	600.9	12.5	94.1
105	19518	0.8	16.5735	1.3	0.8142	3.4	0.0979	3.2	0.93	601.9	18.4	604.8	15.7	615.7	27.3	601.9	18.4	97.8
200	46117	4.3	16.4193	0.8	0.8231	2.8	0.0980	2.6	0.96	602.8	15.2	609.8	12.6	635.9	17.1	602.8	15.2	94.8
952	1033245	8.5	16.4153	0.9	0.8244	2.4	0.0981	2.3	0.93	603.5	13.0	610.5	11.2	636.4	19.8	603.5	13.0	94.8
246	139318	3.4	16.3811	1.3	0.8307	3.4	0.0987	3.1	0.93	606.7	18.1	614.0	15.6	640.9	27.5	606.7	18.1	94.7
110	135179	1.4	16.1896	0.9	0.8426	3.2	0.0989	3.1	0.96	608.2	18.0	620.6	15.1	666.1	20.3	608.2	18.0	91.3
222	27289	1.0	16.3989	0.7	0.8320	2.7	0.0990	2.6	0.97	608.3	14.9	614.7	12.2	638.5	15.0	608.3	14.9	95.3
426	415188	5.2	16.5961	0.7	0.8232	2.4	0.0991	2.2	0.95	609.1	13.0	609.8	10.8	612.7	15.5	609.1	13.0	99.4
145	25860	2.1	16.5177	0.9	0.8309	3.2	0.0995	3.0	0.96	611.7	17.7	614.1	14.6	623.0	19.1	611.7	17.7	98.2
449	47164	11.9	16.5953	0.8	0.8327	2.9	0.1002	2.8	0.96	615.7	16.4	615.1	13.4	612.8	17.6	615.7	16.4	100.5
126	75315	0.6	16.4767	1.5	0.8399	3.6	0.1004	3.2	0.91	616.6	19.1	619.1	16.5	628.3	31.5	616.6	19.1	98.1
1305	141268	18.6	16.5159	0.7	0.8402	2.4	0.1006	2.3	0.96	618.2	13.5	619.3	11.0	623.2	14.5	618.2	13.5	99.2
373	18948	2.7	16.2933	1.1	0.8517	2.6	0.1007	2.3	0.91	618.2	13.7	625.6	12.0	652.4	23.2	618.2	13.7	94.8
134	95423	5.4	16.0824	1.0	0.8657	3.7	0.1010	3.5	0.96	620.1	20.9	633.2	17.3	680.3	21.4	620.1	20.9	91.2
393	48752	4.2	16.1836	0.8	0.8603	2.6	0.1010	2.4	0.95	620.1	14.4	630.3	12.0	666.9	17.1	620.1	14.4	93.0
35	8148	4.1	16.3804	1.2	0.8501	4.1	0.1010	3.9	0.96	620.2	23.1	624.7	19.1	641.0	26.1	620.2	23.1	96.8
245	163854	2.7	16.3580	0.9	0.8521	3.0	0.1011	2.8	0.96	620.8	16.8	625.8	13.8	643.9	18.3	620.8	16.8	96.4
247	53696	2.2	16.3042	0.9	0.8573	2.4	0.1014	2.2	0.92	622.5	13.1	628.7	11.2	651.0	19.6	622.5	13.1	95.6
580	88163	1.5	16.5237	0.7	0.8474	2.5	0.1015	2.4	0.96	623.5	14.1	623.2	11.6	622.2	15.5	623.5	14.1	100.2
226	18510	0.8	16.5123	1.0	0.8488	2.7	0.1017	2.6	0.94	624.1	15.2	624.0	12.8	623.7	20.6	624.1	15.2	100.1
317	88257	0.9	16.1836	0.9	0.8665	3.0	0.1017	2.9	0.95	624.4	17.0	633.6	14.1	666.9	19.4	624.4	17.0	93.6
613	137647	9.7	16.0295	0.8	0.8788	2.2	0.1022	2.0	0.92	627.1	12.1	640.4	10.4	687.3	17.9	627.1	12.1	91.2
673	213495	4.3	16.3685	0.7	0.8631	1.9	0.1025	1.8	0.93	628.8	10.7	631.8	9.0	642.5	14.8	628.8	10.7	97.9
416	66651	3.9	16.5600	0.8	0.8536	2.3	0.1025	2.1	0.93	629.2	12.7	626.6	10.6	617.4	17.5	629.2	12.7	101.9
187	29170	4.6	16.6548	1.2	0.8494	3.2	0.1026	2.9	0.93	629.6	17.6	624.3	14.7	605.1	24.9	629.6	17.6	104.1
132	58717	1.1	16.3980	0.9	0.8637	2.8	0.1027	2.7	0.94	630.3	15.9	632.1	13.2	638.7	19.8	630.3	15.9	98.7
472	134809	4.7	16.6025	0.6	0.8549	2.6	0.1029	2.5	0.97	631.6	15.1	627.3	12.0	611.9	12.5	631.6	15.1	103.2
972	86732	4.2	16.6323	0.6	0.8534	2.3	0.1029	2.2	0.96	631.7	13.3	626.5	10.7	608.0	14.0	631.7	13.3	103.9
110	29785	3.7	16.2431	1.3	0.8740	4.3	0.1030	4.1	0.95	631.7	24.4	637.7	20.2	659.0	27.7	631.7	24.4	95.9
1190	17697	4.2	15.2523	1.7	0.9355	2.6	0.1035	2.0	0.76	634.8	11.9	670.5	12.8	792.5	35.6	634.8	11.9	80.1
131	60901	1.7	16.0674	1.1	0.8918	4.2	0.1039	4.0	0.96	637.3	24.2	647.3	19.9	682.3	24.2	637.3	24.2	93.4
54	6212	1.2	16.2670	2.2	0.8812	4.2	0.1040	3.5	0.85	637.6	21.5	641.6	19.8	655.9	47.2	637.6	21.5	97.2
155	23939	2.5	15.7085	1.3	0.9167	3.4	0.1044	3.2	0.92	640.4	19.4	660.6	16.7	730.4	28.2	640.4	19.4	87.7
102	81074	2.1	16.0788	1.2	0.8958	3.3	0.1045	3.1	0.93	640.5	18.9	649.5	15.9	680.8	25.3	640.5	18.9	94.1

1738	476753	5.6	16.0700	0.8	0.8980	2.1	0.1047	2.0	0.92	641.7	12.1	650.7	10.3	681.9	17.4	641.7	12.1	94.1
617	101697	2.0	16.3683	0.6	0.8826	2.3	0.1048	2.2	0.96	642.3	13.5	642.4	10.9	642.6	13.4	642.3	13.5	100.0
85	23185	1.2	15.2473	1.3	0.9499	3.7	0.1050	3.5	0.94	643.9	21.6	678.0	18.5	793.2	26.6	643.9	21.6	81.2
539	157529	3.9	15.8200	0.7	0.9166	2.1	0.1052	2.0	0.94	644.6	12.0	660.5	10.1	715.4	14.6	644.6	12.0	90.1
389	204039	1.4	16.3742	0.8	0.8909	2.6	0.1058	2.5	0.95	648.3	15.1	646.9	12.4	641.8	17.6	648.3	15.1	101.0
164	88997	2.1	16.1327	1.1	0.9072	3.2	0.1061	3.0	0.94	650.3	18.3	655.6	15.2	673.6	23.4	650.3	18.3	96.5
424	40768	3.7	16.2977	1.0	0.9009	2.9	0.1065	2.8	0.94	652.3	17.1	652.2	14.1	651.8	21.3	652.3	17.1	100.1
123	106771	1.6	16.1809	1.1	0.9105	3.7	0.1069	3.5	0.96	654.4	22.1	657.3	17.9	667.3	22.7	654.4	22.1	98.1
1194	1453177	80.6	16.2560	0.7	0.9088	2.2	0.1071	2.1	0.94	656.1	12.8	656.4	10.6	657.3	15.9	656.1	12.8	99.8
161	11948	4.0	16.4480	1.1	0.9074	2.8	0.1082	2.6	0.92	662.6	16.1	655.7	13.4	632.1	23.4	662.6	16.1	104.8
289	276137	2.6	16.0760	0.8	0.9312	2.8	0.1086	2.6	0.95	664.4	16.5	668.2	13.5	681.1	18.1	664.4	16.5	97.5
412	82734	1.9	15.8928	0.8	0.9465	2.4	0.1091	2.3	0.94	667.5	14.6	676.3	12.1	705.6	17.2	667.5	14.6	94.6
938	760551	2.4	16.2271	0.8	0.9306	2.8	0.1095	2.7	0.96	670.0	16.9	668.0	13.6	661.1	16.9	670.0	16.9	101.3
1597	56055	9.4	15.7466	0.7	0.9636	2.3	0.1100	2.2	0.96	673.0	14.1	685.2	11.5	725.2	14.4	673.0	14.1	92.8
1059	138932	6.4	15.9117	0.8	0.9537	2.1	0.1101	2.0	0.92	673.1	12.6	680.0	10.6	703.1	17.8	673.1	12.6	95.7
651	297137	3.4	15.9341	0.7	0.9599	1.8	0.1109	1.6	0.91	678.2	10.5	683.3	8.9	700.0	15.6	678.2	10.5	96.9
202	127807	5.2	15.8473	1.2	0.9703	2.7	0.1115	2.4	0.89	681.6	15.4	688.6	13.3	711.7	25.3	681.6	15.4	95.8
161	12693	7.8	16.0532	1.0	0.9621	2.9	0.1120	2.7	0.94	684.4	17.9	684.4	14.6	684.2	21.7	684.4	17.9	100.0
178	28794	3.1	15.0802	1.1	1.0359	3.1	0.1133	2.9	0.94	691.9	18.9	721.9	15.9	816.3	22.3	691.9	18.9	84.8
313	83839	53.9	15.5805	1.2	1.0101	3.3	0.1141	3.1	0.94	696.7	20.5	708.9	16.9	747.6	24.7	696.7	20.5	93.2
902	348696	13.0	15.7505	0.8	1.0011	2.0	0.1144	1.8	0.91	698.0	12.0	704.4	10.0	724.7	17.0	698.0	12.0	96.3
142	464481	3.0	15.0443	1.1	1.0568	3.9	0.1153	3.8	0.96	703.5	25.1	732.2	20.5	821.2	23.6	703.5	25.1	85.7
387	32697	1.3	16.0197	0.9	0.9990	2.2	0.1161	2.0	0.91	707.9	13.2	703.3	10.9	688.7	18.7	707.9	13.2	102.8
452	91800	1.2	15.5197	0.7	1.0405	1.9	0.1171	1.8	0.94	714.0	12.2	724.2	9.9	755.9	14.2	714.0	12.2	94.5
136	14487	1.0	15.1688	1.1	1.0706	3.7	0.1178	3.6	0.95	717.8	24.2	739.0	19.6	804.0	24.0	717.8	24.2	89.3
317	80318	0.9	14.6910	0.8	1.1072	2.2	0.1180	2.1	0.93	718.9	14.2	756.8	11.9	870.7	17.1	718.9	14.2	82.6
466	138224	1.4	15.0788	0.8	1.0840	2.7	0.1185	2.6	0.95	722.2	17.5	745.6	14.2	816.4	17.1	722.2	17.5	88.5
102	26227	4.1	15.2986	1.1	1.0933	2.8	0.1213	2.6	0.92	738.1	17.9	750.1	14.9	786.1	23.7	738.1	17.9	93.9
41	12175	2.3	15.2640	1.4	1.1135	3.9	0.1233	3.6	0.93	749.4	25.6	759.9	20.7	790.8	29.0	749.4	25.6	94.8
225	1314677	7.0	15.3554	1.0	1.1263	3.8	0.1254	3.6	0.97	761.8	26.1	766.0	20.2	778.3	20.6	761.8	26.1	97.9
814	1370133	2.6	15.2292	0.8	1.1367	3.0	0.1256	2.9	0.96	762.4	21.1	770.9	16.5	795.6	17.5	762.4	21.1	95.8
986	77651	1.7	15.3005	0.7	1.1326	2.4	0.1257	2.3	0.96	763.2	16.3	769.0	12.7	785.8	13.8	763.2	16.3	97.1
58	18328	1.3	14.4540	1.2	1.2062	4.2	0.1264	4.1	0.96	767.5	29.4	803.4	23.5	904.2	23.8	767.5	29.4	84.9
49	9106	2.8	15.0656	1.3	1.1727	4.2	0.1281	4.0	0.95	777.2	29.6	787.9	23.3	818.3	27.5	777.2	29.6	95.0
169	19314	5.3	14.4304	0.8	1.2337	3.2	0.1291	3.1	0.97	782.9	23.0	816.0	18.1	907.6	17.4	782.9	23.0	86.3
153	41940	1.8	14.3894	0.9	1.2518	2.5	0.1306	2.3	0.92	791.5	17.0	824.2	13.9	913.5	19.3	791.5	17.0	86.7
274	53312	2.0	14.5513	0.8	1.2533	3.1	0.1323	3.0	0.97	800.8	22.7	824.9	17.6	890.4	16.1	800.8	22.7	89.9
549	121294	3.2	14.2672	0.9	1.3310	2.6	0.1377	2.5	0.93	831.8	19.2	859.3	15.3	931.0	19.3	831.8	19.2	89.3
251	76141	9.8	14.7054	0.7	1.2943	2.2	0.1380	2.0	0.94	833.6	16.0	843.2	12.5	868.6	15.5	833.6	16.0	96.0
85	15728	1.8	14.5890	1.1	1.3262	4.1	0.1403	4.0	0.97	846.5	31.7	857.2	23.9	885.1	21.7	846.5	31.7	95.6
204	1240751	3.5	14.5421	1.1	1.3526	3.6	0.1427	3.4	0.95	859.7	27.7	868.7	21.1	891.7	22.2	859.7	27.7	96.4
519	77407	1.9	14.2535	0.7	1.3884	2.0	0.1435	1.8	0.93	864.6	14.7	884.0	11.6	933.0	14.7	864.6	14.7	92.7
571	58637	8.7	14.4783	1.2	1.3787	3.0	0.1448	2.7	0.91	871.6	22.4	879.9	17.7	900.8	25.0	871.6	22.4	96.8
24	4007	3.6	*14.4336*	*1.9*	1.4283	5.4	0.1495	5.1	0.94	898.3	42.7	900.8	32.5	907.1	39.2	907.1	39.2	99.0
111	28117	0.9	14.1328	1.0	1.4242	3.3	0.1460	3.2	0.96	878.4	26.3	899.1	20.0	950.4	20.0	950.4	20.0	92.4
295	93348	1.2	14.0773	0.9	1.4740	2.8	0.1505	2.7	0.95	903.7	22.6	919.8	17.0	958.4	17.9	958.4	17.9	94.3
500	77208	21.9	14.0632	1.0	1.3919	2.8	0.1420	2.6	0.94	855.8	21.0	885.5	16.5	960.5	20.0	960.5	20.0	89.1
331	111949	15.5	14.0540	0.9	1.4659	2.8	0.1494	2.6	0.94	897.7	22.1	916.4	16.9	961.9	19.1	961.9	19.1	93.3
575	62748	1.3	14.0444	0.9	1.4636	2.6	0.1491	2.5	0.94	895.8	20.5	915.5	15.7	963.3	17.8	963.3	17.8	93.0
475	86109	11.7	14.0390	0.9	1.4587	2.9	0.1485	2.8	0.95	892.7	23.3	913.5	17.6	964.0	17.9	964.0	17.9	92.6
134	14810	2.0	14.0096	0.7	1.4634	2.8	0.1487	2.7	0.97	893.6	22.3	915.4	16.7	968.3	14.5	968.3	14.5	92.3
142	34369	1.5	13.9735	1.0	1.4667	3.4	0.1486	3.3	0.96	893.3	27.5	916.8	20.7	973.6	19.9	973.6	19.9	91.8
374	45241	5.2	13.9587	0.7	1.5871	3.7	0.1607	3.6	0.98	960.6	32.0	965.2	22.8	975.7	15.0	975.7	15.0	98.4
151	39294	1.6	13.9430	1.0	1.5971	3.9	0.1615	3.7	0.97	965.2	33.5	969.1	24.1	978.0	19.4	978.0	19.4	98.7
417	68916	4.7	13.9372	0.7	1.6558	2.3	0.1674	2.2	0.95	997.6	20.2	991.8	14.5	978.8	14.2	978.8	14.2	101.9
434	76366	8.1	13.9101	0.8	1.6821	2.7	0.1697	2.6	0.95	1010.5	24.1	1001.8	17.2	982.8	16.9	982.8	16.9	102.8
132	22940	3.5	13.8944	1.1	1.6130	3.5	0.1625	3.3	0.95	970.9	29.9	975.3	22.0	985.1	23.0	985.1	23.0	98.6
288	55266	8.5	13.8897	0.9	1.6698	2.6	0.1682	2.4	0.93	1002.2	22.4	997.1	16.5	985.8	19.3	985.8	19.3	101.7
371	62086	3.0	13.8724	1.1	1.6678	3.2	0.1678	3.0	0.94	1000.0	27.8	996.3	20.2	988.4	21.5	988.4	21.5	101.2
229	70911	5.0	13.8520	0.7	1.6718	2.7	0.1680	2.6	0.96	1000.9	24.0	997.9	17.1	991.3	14.8	991.3	14.8	101.0
204	139112	2.3	13.8469	0.9	1.5217	4.2	0.1528	4.1	0.98	916.8	35.2	939.2	25.9	992.1	19.0	992.1	19.0	92.4
108	108323	3.3	13.8303	0.9	1.6461	3.4	0.1651	3.2	0.96	985.1	29.6	988.1	21.3	994.5	19.1	994.5	19.1	99.1
233	365225	2.7	13.7854	1.0	1.7206	3.4	0.1720	3.3	0.96	1023.3	31.0	1016.2	22.0	1001.1	19.6	1001.1	19.6	102.2

425	66923	13.9	13.7785	0.9	1.6309	2.6	0.1630	2.5	0.95	973.3	22.3	982.2	16.5	1002.1	17.3	1002.1	17.3	97.1
1018	369829	2.6	13.7702	0.9	1.4765	2.5	0.1475	2.4	0.93	886.7	19.6	920.8	15.4	1003.4	18.8	1003.4	18.8	88.4
854	234469	8.1	13.7629	0.7	1.5411	2.0	0.1538	1.9	0.94	922.4	16.3	946.9	12.4	1004.4	14.4	1004.4	14.4	91.8
580	95143	10.0	13.7598	1.0	1.6236	3.9	0.1620	3.7	0.97	968.0	33.7	979.4	24.4	1004.9	20.3	1004.9	20.3	96.3
421	166800	3.4	13.7561	1.1	1.7039	2.7	0.1700	2.5	0.91	1012.1	23.3	1010.0	17.4	1005.4	22.4	1005.4	22.4	100.7
447	152145	16.4	13.7408	0.8	1.5821	3.2	0.1577	3.1	0.96	943.8	27.3	963.2	20.1	1007.7	17.1	1007.7	17.1	93.7
21	8825	2.0	13.7369	1.6	1.7241	7.2	0.1718	7.0	0.98	1021.9	66.2	1017.6	46.2	1008.3	32.2	1008.3	32.2	101.3
40	37406	5.3	13.7205	1.2	1.6169	5.0	0.1609	4.9	0.97	961.8	43.5	976.8	31.6	1010.7	25.3	1010.7	25.3	95.2
112	28180	1.3	13.7061	0.7	1.6937	3.4	0.1684	3.3	0.98	1003.1	30.6	1006.1	21.6	1012.8	14.9	1012.8	14.9	99.0
261	29283	1.9	13.7017	0.9	1.6347	2.5	0.1624	2.4	0.94	970.3	21.3	983.7	15.9	1013.5	17.7	1013.5	17.7	95.7
206	37524	2.5	13.6992	0.7	1.7273	2.6	0.1716	2.5	0.96	1021.0	23.5	1018.7	16.7	1013.9	15.0	1013.9	15.0	100.7
681	3152628	2.0	13.6853	0.7	1.5388	2.5	0.1527	2.4	0.96	916.3	20.2	946.0	15.2	1015.9	13.9	1015.9	13.9	90.2
160	260170	2.2	13.6637	0.9	1.6571	3.5	0.1642	3.4	0.96	980.1	30.9	992.2	22.3	1019.1	18.8	1019.1	18.8	96.2
590	188814	3.3	13.6619	1.0	1.6271	2.6	0.1612	2.4	0.92	963.5	21.1	980.7	16.2	1019.4	20.9	1019.4	20.9	94.5
843	972086	3.7	13.6608	0.9	1.7272	2.4	0.1711	2.3	0.93	1018.3	21.3	1018.7	15.7	1019.5	18.5	1019.5	18.5	99.9
527	787008	15.0	13.6500	0.7	1.6980	2.3	0.1681	2.2	0.96	1001.7	20.3	1007.8	14.7	1021.1	13.7	1021.1	13.7	98.1
280	96386	2.8	13.6446	0.8	1.7154	3.0	0.1698	2.9	0.96	1010.8	26.9	1014.3	19.2	1021.9	16.5	1021.9	16.5	98.9
776	54301	2.5	13.6414	0.8	1.6088	2.8	0.1592	2.6	0.96	952.1	23.5	973.6	17.3	1022.4	15.3	1022.4	15.3	93.1
541	22580	1.6	13.6283	0.9	1.4059	2.5	0.1390	2.3	0.94	838.8	18.2	891.4	14.6	1024.4	17.2	1024.4	17.2	81.9
143	52677	3.1	13.6282	0.8	1.7919	3.5	0.1771	3.4	0.97	1051.2	32.9	1042.5	22.7	1024.4	15.9	1024.4	15.9	102.6
208	207159	2.1	13.6244	0.8	1.7169	2.6	0.1697	2.4	0.95	1010.2	22.8	1014.9	16.5	1024.9	16.6	1024.9	16.6	98.6
380	302999	2.0	13.6236	0.9	1.7404	3.3	0.1720	3.1	0.96	1022.9	29.7	1023.6	21.1	1025.0	18.6	1025.0	18.6	99.8
1484	45566	2.1	13.6189	1.0	1.5460	2.3	0.1527	2.1	0.90	916.1	17.6	948.9	14.1	1025.7	19.8	1025.7	19.8	89.3
223	20342	1.9	13.6065	0.7	1.6861	2.6	0.1664	2.5	0.96	992.2	23.4	1003.3	16.8	1027.6	14.5	1027.6	14.5	96.6
207	261357	4.6	13.6020	0.7	1.6996	3.4	0.1677	3.3	0.97	999.2	30.3	1008.4	21.5	1028.3	15.1	1028.3	15.1	97.2
101	21280	2.6	13.6012	1.2	1.8407	3.3	0.1816	3.1	0.93	1075.6	30.9	1060.1	22.0	1028.4	24.6	1028.4	24.6	104.6
84	20273	1.7	13.5998	0.9	1.7163	4.0	0.1693	3.9	0.97	1008.2	36.1	1014.7	25.6	1028.6	18.8	1028.6	18.8	98.0
535	594915	2.9	13.5828	0.7	1.7638	2.2	0.1738	2.0	0.94	1032.7	19.5	1032.2	14.1	1031.1	15.1	1031.1	15.1	100.2
137	98074	1.7	13.5773	0.9	1.6121	3.2	0.1587	3.0	0.96	949.8	26.7	974.9	19.8	1031.9	17.9	1031.9	17.9	92.0
306	59145	2.1	13.5763	1.1	1.7380	3.1	0.1711	2.9	0.93	1018.3	26.9	1022.7	19.8	1032.1	22.8	1032.1	22.8	98.7
261	412357	2.0	13.5744	0.7	1.8029	2.5	0.1775	2.4	0.96	1053.3	23.1	1046.5	16.2	1032.4	14.6	1032.4	14.6	102.0
772	135848	8.0	13.5691	0.8	1.7397	2.5	0.1712	2.3	0.94	1018.8	21.9	1023.4	16.0	1033.2	17.1	1033.2	17.1	98.6
262	114829	3.2	13.5663	0.7	1.7525	2.6	0.1724	2.5	0.96	1025.5	24.1	1028.1	17.1	1033.6	14.9	1033.6	14.9	99.2
249	39528	3.5	13.5630	0.9	1.7323	3.1	0.1704	3.0	0.95	1014.3	28.0	1020.6	20.1	1034.1	19.2	1034.1	19.2	98.1
142	51794	2.5	13.5375	0.9	1.6989	2.6	0.1668	2.5	0.94	994.5	22.9	1008.1	16.9	1037.9	18.5	1037.9	18.5	95.8
329	439891	1.5	13.5238	1.0	1.8120	2.7	0.1777	2.5	0.93	1054.5	24.4	1049.8	17.5	1039.9	19.2	1039.9	19.2	101.4
51	13947	2.4	13.5168	1.5	1.7860	4.5	0.1751	4.2	0.94	1040.1	40.5	1040.4	29.0	1041.0	29.6	1041.0	29.6	99.9
239	293078	2.5	13.4694	0.9	1.7009	2.8	0.1662	2.6	0.95	990.9	24.0	1008.9	17.7	1048.1	17.9	1048.1	17.9	94.5
651	55481	2.0	13.4500	0.7	1.7017	2.3	0.1660	2.2	0.95	990.0	20.1	1009.2	14.8	1051.0	14.4	1051.0	14.4	94.2
199	33152	2.4	13.4477	1.0	1.5833	3.5	0.1544	3.4	0.96	925.7	29.0	963.7	21.8	1051.3	19.9	1051.3	19.9	88.1
340	112768	2.6	13.4473	0.7	1.8756	2.5	0.1829	2.4	0.96	1082.9	24.3	1072.5	16.8	1051.4	14.0	1051.4	14.0	103.0
149	57261	3.1	13.4468	1.1	1.6811	4.0	0.1639	3.9	0.96	978.7	35.4	1001.4	25.7	1051.5	21.5	1051.5	21.5	93.1
846	376617	11.1	13.4458	0.7	1.6829	2.1	0.1641	2.0	0.95	979.6	18.5	1002.1	13.6	1051.6	13.4	1051.6	13.4	93.1
219	112712	3.4	13.4399	1.0	1.7139	2.8	0.1671	2.6	0.93	995.9	23.6	1013.8	17.7	1052.5	20.9	1052.5	20.9	94.6
94	10983	5.2	13.4353	0.9	1.7138	3.4	0.1670	3.3	0.96	995.6	30.1	1013.7	21.8	1053.2	19.2	1053.2	19.2	94.5
233	39343	2.3	13.4248	0.9	1.5020	3.5	0.1462	3.3	0.96	879.8	27.4	931.2	21.1	1054.8	18.7	1054.8	18.7	83.4
72	189888	1.3	13.4120	1.1	1.7137	4.6	0.1667	4.4	0.97	993.9	40.6	1013.7	29.2	1056.7	23.1	1056.7	23.1	94.1
873	3422666	31.2	13.4052	0.7	1.7927	2.1	0.1743	1.9	0.95	1035.7	18.6	1042.8	13.4	1057.7	13.3	1057.7	13.3	97.9
599	187970	2.3	13.3913	0.9	1.8063	2.5	0.1754	2.3	0.94	1042.0	22.6	1047.8	16.3	1059.8	17.1	1059.8	17.1	98.3
192	49060	3.5	13.3827	0.9	1.7594	2.6	0.1708	2.4	0.94	1016.4	22.5	1030.6	16.5	1061.1	17.6	1061.1	17.6	95.8
113	42944	2.0	13.3745	0.9	1.7213	3.7	0.1670	3.6	0.97	995.4	33.4	1016.5	23.9	1062.3	17.7	1062.3	17.7	93.7
142	40188	2.2	13.3376	1.1	1.8069	2.9	0.1748	2.7	0.93	1038.4	25.6	1048.0	18.8	1067.9	21.5	1067.9	21.5	97.2
47	31457	3.2	13.3223	1.2	1.7033	4.9	0.1646	4.7	0.97	982.2	43.2	1009.8	31.3	1070.2	24.6	1070.2	24.6	91.8
323	36087	3.4	13.3163	0.7	1.7416	2.5	0.1682	2.4	0.96	1002.2	22.4	1024.1	16.3	1071.1	14.4	1071.1	14.4	93.6
329	1251154	1.9	13.2939	0.8	1.8305	3.1	0.1765	3.0	0.97	1047.8	28.6	1056.4	20.1	1074.5	15.9	1074.5	15.9	97.5
279	212042	1.3	13.2882	0.9	1.8998	2.6	0.1831	2.5	0.94	1083.8	24.9	1081.0	17.6	1075.3	17.6	1075.3	17.6	100.8
915	222313	8.6	13.2741	0.7	1.8163	2.1	0.1749	2.0	0.95	1038.8	19.4	1051.3	13.9	1077.5	13.1	1077.5	13.1	96.4
222	51420	4.8	13.2673	0.9	1.8663	2.6	0.1796	2.5	0.93	1064.7	24.1	1069.2	17.4	1078.5	19.0	1078.5	19.0	98.7
227	51336	2.5	13.2549	0.6	1.9245	2.4	0.1850	2.3	0.97	1094.3	23.2	1089.6	15.9	1080.4	11.3	1080.4	11.3	101.3
377	300910	2.0	13.2431	0.8	1.8648	2.4	0.1791	2.2	0.94	1062.1	21.9	1068.7	15.7	1082.1	16.3	1082.1	16.3	98.2
148	21681	2.2	13.2361	1.0	1.5801	3.1	0.1517	2.9	0.94	910.4	24.4	962.4	19.0	1083.2	20.8	1083.2	20.8	84.1
113	46924	1.2	13.2313	0.7	1.8763	3.3	0.1801	3.2	0.98	1067.3	31.6	1072.8	21.8	1083.9	14.0	1083.9	14.0	98.5
249	39257	1.2	13.2298	0.9	1.9092	2.8	0.1832	2.6	0.94	1084.4	26.1	1084.3	18.5	1084.2	18.2	1084.2	18.2	100.0

329	36716	1.4	13.2245	0.9	1.8585	2.9	0.1783	2.8	0.95	1057.5	27.4	1066.5	19.5	1085.0	18.1	1085.0	18.1	97.5
201	47970	1.7	13.2128	0.8	1.7734	2.9	0.1699	2.8	0.96	1011.8	26.3	1035.8	19.0	1086.7	16.4	1086.7	16.4	93.1
168	45300	1.7	13.1967	1.0	1.8970	2.7	0.1816	2.6	0.93	1075.5	25.4	1080.0	18.2	1089.2	19.6	1089.2	19.6	98.7
86	54234	2.6	13.1799	1.2	1.8006	3.4	0.1721	3.2	0.94	1023.8	30.4	1045.7	22.4	1091.7	23.6	1091.7	23.6	93.8
186	110524	3.0	13.1771	0.9	1.8963	2.6	0.1812	2.5	0.95	1073.7	24.4	1079.8	17.4	1092.1	17.0	1092.1	17.0	98.3
153	68833	2.2	13.1594	0.8	1.9036	2.5	0.1817	2.3	0.95	1076.1	23.3	1082.3	16.5	1094.9	15.6	1094.9	15.6	98.3
116	15149	2.7	13.1525	1.2	1.7052	3.4	0.1627	3.2	0.93	971.6	28.7	1010.5	21.8	1095.9	24.7	1095.9	24.7	88.7
305	177290	5.8	13.1480	0.8	1.8863	2.6	0.1799	2.5	0.95	1066.3	24.2	1076.3	17.2	1096.6	16.3	1096.6	16.3	97.2
281	20977	3.4	13.1413	0.8	1.7596	3.1	0.1677	3.0	0.96	999.5	27.8	1030.7	20.1	1097.6	16.3	1097.6	16.3	91.1
179	455494	2.9	13.1369	1.0	1.8200	3.2	0.1734	3.1	0.95	1030.9	29.3	1052.7	21.2	1098.3	19.7	1098.3	19.7	93.9
449	20014	3.6	13.1299	0.8	1.9146	2.2	0.1823	2.1	0.92	1079.7	20.5	1086.2	14.9	1099.3	17.0	1099.3	17.0	98.2
148	454398	3.5	13.1193	1.1	1.9315	3.6	0.1838	3.4	0.95	1087.6	33.9	1092.1	23.9	1100.9	22.7	1100.9	22.7	98.8
142	54626	2.5	13.1039	0.7	1.9364	2.6	0.1840	2.5	0.97	1089.0	24.9	1093.8	17.2	1103.3	13.1	1103.3	13.1	98.7
209	255847	1.1	13.0801	0.9	1.9275	3.2	0.1829	3.1	0.96	1082.5	31.0	1090.7	21.6	1106.9	17.0	1106.9	17.0	97.8
134	3519558	4.4	13.0777	0.9	1.8559	3.1	0.1760	2.9	0.96	1045.2	28.3	1065.5	20.2	1107.3	17.0	1107.3	17.0	94.4
57	36016	1.3	13.0718	1.1	1.8531	4.8	0.1757	4.7	0.97	1043.4	44.9	1064.5	31.7	1108.2	22.8	1108.2	22.8	94.2
306	149209	5.9	13.0680	0.9	1.9828	2.6	0.1879	2.4	0.94	1110.1	24.8	1109.7	17.5	1108.8	17.8	1108.8	17.8	100.1
50	21824	1.1	13.0655	1.1	1.8911	3.9	0.1792	3.7	0.96	1062.6	36.1	1078.0	25.6	1109.1	22.6	1109.1	22.6	95.8
124	152605	0.9	13.0617	0.9	1.6946	3.0	0.1605	2.9	0.95	959.7	25.7	1006.5	19.3	1109.7	18.1	1109.7	18.1	86.5
131	48647	1.8	12.9494	1.0	2.0036	3.4	0.1882	3.2	0.95	1111.5	32.8	1116.7	22.8	1126.9	20.1	1126.9	20.1	98.6
248	1393565	1.1	12.8286	0.8	2.0695	2.8	0.1926	2.7	0.96	1135.2	27.9	1138.8	19.2	1145.6	16.1	1145.6	16.1	99.1
401	1100281	1.0	12.8244	0.9	2.1222	2.2	0.1974	2.0	0.91	1161.3	21.2	1156.1	15.2	1146.3	18.4	1146.3	18.4	101.3
365	163809	5.2	12.8239	0.7	2.0591	2.7	0.1915	2.6	0.96	1129.6	27.2	1135.3	18.6	1146.3	14.5	1146.3	14.5	98.5
739	15573	4.0	12.8236	0.8	1.8608	2.2	0.1731	2.0	0.92	1029.0	19.0	1067.3	14.3	1146.4	16.5	1146.4	16.5	89.8
77	4773	4.4	12.7996	2.3	1.7793	3.9	0.1652	3.1	0.81	985.4	28.7	1037.9	25.3	1150.1	45.3	1150.1	45.3	85.7
364	78557	5.8	12.7818	0.7	2.1224	2.5	0.1967	2.4	0.96	1157.8	25.8	1156.1	17.5	1152.9	14.2	1152.9	14.2	100.4
205	179428	1.0	12.5564	0.9	2.1739	3.0	0.1980	2.8	0.95	1164.4	30.3	1172.7	20.8	1188.1	18.6	1188.1	18.6	98.0
502	13813	3.1	11.8654	1.7	2.2130	3.1	0.1904	2.6	0.83	1123.7	26.5	1185.1	21.6	1299.0	33.3	1299.0	33.3	86.5
121	24410	1.5	11.1569	0.9	2.7808	3.2	0.2250	3.0	0.96	1308.3	36.0	1350.4	23.6	1417.7	16.9	1417.7	16.9	92.3
1160	60114	16.6	10.5275	0.7	2.7921	1.9	0.2132	1.8	0.93	1245.8	20.2	1353.4	14.3	1527.8	13.3	1527.8	13.3	81.5
264	109603	0.9	10.1413	0.9	3.6776	3.2	0.2705	3.0	0.96	1543.3	41.6	1566.5	25.3	1597.9	17.4	1597.9	17.4	96.6
548	395846	7.2	9.9662	0.7	3.9634	2.7	0.2865	2.6	0.96	1623.9	36.7	1626.7	21.5	1630.4	13.4	1630.4	13.4	99.6
354	431319	3.6	9.9644	0.8	3.9253	3.2	0.2837	3.1	0.97	1609.9	43.8	1618.9	25.6	1630.7	14.3	1630.7	14.3	98.7
262	92851	3.3	9.8186	0.9	3.9819	3.3	0.2836	3.2	0.96	1609.2	45.2	1630.5	26.7	1658.0	16.4	1658.0	16.4	97.1
86	308233	0.9	9.3225	1.3	4.2857	6.3	0.2898	6.1	0.98	1640.4	89.0	1690.6	51.8	1753.5	24.3	1753.5	24.3	93.5
495	816279	2.4	9.1362	0.8	4.5912	2.2	0.3042	2.1	0.94	1712.2	31.1	1747.7	18.4	1790.3	14.3	1790.3	14.3	95.6
401	127120	9.0	9.0021	0.7	4.7814	2.4	0.3122	2.3	0.96	1751.4	34.9	1781.6	19.9	1817.2	12.5	1817.2	12.5	96.4
276	202407	1.7	8.7851	0.6	5.0984	2.5	0.3248	2.4	0.97	1813.3	37.8	1835.8	20.9	1861.4	10.8	1861.4	10.8	97.4
205	75169	2.3	6.1867	0.8	10.0094	3.3	0.4491	3.2	0.97	2391.4	64.8	2435.6	30.8	2472.8	13.4	2472.8	13.4	96.7
231	262484	1.7	6.1590	1.0	9.0268	3.1	0.4032	2.9	0.95	2183.8	54.2	2340.7	28.3	2480.4	17.0	2480.4	17.0	88.0
67	98636	0.7	5.8939	0.9	9.4480	4.4	0.4039	4.3	0.98	2186.8	79.1	2382.5	40.0	2554.3	14.8	2554.3	14.8	85.6
358	371286	0.6	5.6781	0.6	11.5625	2.3	0.4762	2.2	0.96	2510.5	46.6	2569.6	21.7	2616.6	10.4	2616.6	10.4	95.9
564	589872	2.6	4.8539	0.7	13.2150	2.9	0.4652	2.8	0.97	2462.5	57.5	2695.1	27.4	2874.5	11.9	2874.5	11.9	85.7
344	9375815	1.5	4.3476	0.6	17.3428	2.6	0.5469	2.6	0.97	2812.1	58.4	2954.0	25.3	3052.1	10.0	3052.1	10.0	92.1

Recovery Glacier Tills

Whichaway Nunataks

					Isotope ratios							Apparent ages (Ma)						
U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
68	16776	2.1	17.1816	1.4	0.6529	3.9	0.0814	3.7	0.93	504.2	17.8	510.3	15.8	537.4	30.8	504.2	17.8	93.8
158	57525	3.3	16.9556	1.0	0.6629	2.7	0.0815	2.5	0.93	505.2	12.2	516.4	10.9	566.3	21.4	505.2	12.2	89.2
417	334463	7.3	17.2924	1.0	0.6514	2.4	0.0817	2.2	0.91	506.3	10.5	509.4	9.5	523.3	22.1	506.3	10.5	96.7
181	110174	1.0	17.2724	0.8	0.6544	3.0	0.0820	2.9	0.96	507.9	14.2	511.2	12.2	525.8	18.2	507.9	14.2	96.6
254	45951	1.6	17.1878	0.8	0.6589	2.8	0.0821	2.6	0.95	508.9	12.9	514.0	11.1	536.6	18.6	508.9	12.9	94.8
108	41807	2.2	16.8188	0.9	0.6773	3.7	0.0826	3.5	0.97	511.7	17.4	525.1	15.0	583.9	20.3	511.7	17.4	87.6
182	187051	3.6	17.1485	1.1	0.6647	2.7	0.0827	2.5	0.91	512.1	12.3	517.5	11.1	541.6	24.5	512.1	12.3	94.5
62	21371	1.7	17.2667	1.6	0.6603	4.3	0.0827	4.0	0.93	512.1	19.8	514.8	17.5	526.6	36.0	512.1	19.8	97.3
164	9217	2.9	16.7635	1.3	0.6811	3.5	0.0828	3.2	0.93	512.9	15.9	527.5	14.3	591.0	27.2	512.9	15.9	86.8
123	15610	0.9	17.1828	1.2	0.6677	2.7	0.0832	2.5	0.90	515.3	12.3	519.3	11.2	537.2	25.9	515.3	12.3	95.9
98	113023	1.9	17.0879	1.3	0.6716	3.0	0.0832	2.7	0.91	515.4	13.6	521.7	12.3	549.3	27.9	515.4	13.6	93.8
129	260630	3.5	16.8524	1.0	0.6813	2.9	0.0833	2.7	0.93	515.6	13.3	527.5	11.8	579.5	22.1	515.6	13.3	89.0
81	12236	1.9	16.9116	1.3	0.6802	3.6	0.0834	3.3	0.93	516.6	16.5	526.9	14.7	571.9	28.0	516.6	16.5	90.3
56	36550	1.0	17.1374	1.4	0.6752	3.3	0.0839	3.0	0.91	519.5	14.9	523.9	13.4	543.0	30.0	519.5	14.9	95.7
395	243074	130.0	17.4070	0.9	0.6655	2.7	0.0840	2.5	0.95	520.1	12.6	518.0	10.8	508.8	19.1	520.1	12.6	102.2
115	31029	4.2	17.1966	1.2	0.6751	3.4	0.0842	3.2	0.94	521.2	16.0	523.8	14.0	535.5	26.2	521.2	16.0	97.3
212	204348	2.3	17.0274	0.9	0.6820	2.6	0.0842	2.4	0.93	521.3	12.0	528.0	10.6	557.1	20.2	521.3	12.0	93.6
1032	390582	2.9	17.2510	0.7	0.6740	2.4	0.0843	2.3	0.96	521.9	11.5	523.2	9.7	528.6	14.6	521.9	11.5	98.7
213	102675	9.6	17.4273	1.0	0.6673	2.7	0.0843	2.5	0.93	522.0	12.6	519.1	10.9	506.2	20.9	522.0	12.6	103.1
456	103177	34.9	17.2896	0.8	0.6729	2.3	0.0844	2.1	0.93	522.2	10.6	522.5	9.3	523.6	17.7	522.2	10.6	99.7
384	54659	5.2	17.1971	0.8	0.6765	2.5	0.0844	2.4	0.94	522.2	12.1	524.7	10.4	535.4	18.4	522.2	12.1	97.5
254	50025	5.7	17.1588	0.8	0.6808	3.0	0.0847	2.9	0.96	524.3	14.4	527.3	12.3	540.3	18.1	524.3	14.4	97.0
79	35173	4.0	16.9907	1.4	0.6883	4.0	0.0848	3.8	0.94	524.8	19.0	531.8	16.6	561.8	29.4	524.8	19.0	93.4
72	64351	0.6	16.9081	1.3	0.6925	3.4	0.0849	3.1	0.92	525.4	15.7	534.3	14.0	572.4	28.4	525.4	15.7	91.8
186	283652	3.0	17.0202	0.7	0.6890	2.4	0.0851	2.3	0.95	526.2	11.8	532.2	10.1	558.0	16.2	526.2	11.8	94.3
345	96128	2.0	16.9157	0.9	0.6946	2.7	0.0852	2.5	0.94	527.2	12.8	535.6	11.3	571.4	20.4	527.2	12.8	92.3
208	196315	4.2	17.0141	0.9	0.6907	2.7	0.0852	2.6	0.95	527.3	13.1	533.2	11.3	558.7	18.8	527.3	13.1	94.4
35	20631	1.4	16.7089	1.9	0.7038	4.3	0.0853	3.9	0.90	527.6	19.5	541.1	18.0	598.1	40.3	527.6	19.5	88.2
228	28653	69.5	17.2938	1.0	0.6802	2.6	0.0853	2.4	0.92	527.8	12.1	526.9	10.7	523.1	22.5	527.8	12.1	100.9
90	106893	1.4	16.7723	1.3	0.7017	3.0	0.0854	2.7	0.90	528.0	13.6	539.8	12.4	589.9	27.5	528.0	13.6	89.5
109	36025	2.0	16.8942	1.1	0.6968	3.2	0.0854	3.0	0.93	528.1	15.0	536.9	13.2	574.2	24.8	528.1	15.0	92.0
467	161253	9.8	16.9729	0.8	0.6944	2.6	0.0855	2.5	0.95	528.7	12.6	535.4	10.8	564.0	17.0	528.7	12.6	93.7
94	28931	0.9	16.9650	1.3	0.6957	3.0	0.0856	2.7	0.90	529.5	13.7	536.2	12.5	565.0	28.7	529.5	13.7	93.7
140	19921	3.1	17.1700	0.9	0.6889	2.8	0.0858	2.6	0.94	530.6	13.4	532.2	11.5	538.8	20.0	530.6	13.4	98.5
234	88560	0.7	17.0522	0.9	0.6939	2.7	0.0858	2.6	0.95	530.8	13.3	535.2	11.4	553.9	19.1	530.8	13.3	95.8
287	103821	214.6	17.1391	1.2	0.6913	3.0	0.0859	2.7	0.92	531.4	14.0	533.6	12.4	542.8	25.9	531.4	14.0	97.9
322	163548	8.8	17.1412	0.7	0.6920	2.7	0.0860	2.6	0.96	532.0	13.4	534.0	11.3	542.5	16.0	532.0	13.4	98.1
61	21334	4.6	16.7809	1.4	0.7076	2.9	0.0861	2.5	0.88	532.5	13.0	543.3	12.2	588.8	30.3	532.5	13.0	90.4
761	116395	2.8	17.0142	0.7	0.6995	2.2	0.0863	2.1	0.94	533.8	10.7	538.5	9.2	558.7	16.2	533.8	10.7	95.5
294	154101	3.9	17.0360	0.8	0.7010	2.4	0.0866	2.3	0.94	535.5	11.7	539.4	10.2	556.0	18.3	535.5	11.7	96.3
112	25412	4.2	16.8724	1.2	0.7084	3.3	0.0867	3.1	0.93	535.9	16.0	543.8	14.1	577.0	26.3	535.9	16.0	92.9
130	30322	5.4	16.7177	1.4	0.7172	3.8	0.0870	3.6	0.93	537.5	18.5	549.0	16.3	597.0	30.3	537.5	18.5	90.0
244	22194804	78.7	17.0107	1.1	0.7049	2.8	0.0870	2.6	0.92	537.6	13.4	541.7	11.9	559.2	24.2	537.6	13.4	96.1
63	11105	1.6	17.0169	1.3	0.7048	3.2	0.0870	2.9	0.90	537.7	14.7	541.6	13.3	558.4	29.3	537.7	14.7	96.3
454	47145	4.4	17.2629	0.8	0.6956	2.4	0.0871	2.3	0.95	538.3	11.8	536.1	10.0	527.1	17.1	538.3	11.8	102.1
356	372459	4.2	16.9993	0.8	0.7067	2.4	0.0871	2.3	0.94	538.5	11.7	542.8	10.1	560.7	17.3	538.5	11.7	96.1
237	26783	1.3	17.1249	1.0	0.7027	2.8	0.0873	2.7	0.94	539.4	13.8	540.4	11.9	544.6	21.4	539.4	13.8	99.1
244	101404	8.9	17.0459	0.7	0.7065	2.3	0.0873	2.2	0.96	539.8	11.2	542.6	9.5	554.7	14.4	539.8	11.2	97.3
294	434954	4.8	17.1749	0.9	0.7022	2.6	0.0875	2.4	0.93	540.6	12.4	540.1	10.7	538.2	20.6	540.6	12.4	100.4
355	218049	9.1	16.9609	0.6	0.7117	2.6	0.0875	2.5	0.97	541.0	13.0	545.7	10.9	565.6	13.0	541.0	13.0	95.7
185	19966	1.5	16.4368	1.1	0.7349	2.7	0.0876	2.4	0.92	541.4	12.6	559.4	11.4	633.6	23.1	541.4	12.6	85.4
128	49541	3.9	16.6949	1.0	0.7245	2.8	0.0877	2.6	0.93	542.0	13.5	553.3	12.0	599.9	22.7	542.0	13.5	90.4
182	33738	3.7	17.1252	0.7	0.7073	2.2	0.0878	2.1	0.94	542.8	11.0	543.1	9.4	544.5	16.1	542.8	11.0	99.7
746	254063	23.2	17.1808	0.7	0.7054	2.2	0.0879	2.1	0.94	543.1	10.9	542.0	9.3	537.5	15.9	543.1	10.9	101.0
88	126796	2.3	16.8857	1.1	0.7187	2.7	0.0880	2.5	0.92	543.8	13.1	549.9	11.6	575.2	23.6	543.8	13.1	94.5
17	11703	0.9	16.3028	2.8	0.7453	6.7	0.0881	6.0	0.90	544.5	31.4	565.5	28.9	651.1	60.9	544.5	31.4	83.6
795	273823	21.4	17.3199	0.9	0.7024	2.2	0.0882	2.0	0.92	545.1	10.6	540.2	9.3	519.8	18.7	545.1	10.6	104.9

202	53998	3.6	17.2476	0.9	0.7066	2.9	0.0884	2.8	0.95	546.0	14.4	542.8	12.1	529.0	19.2	546.0	14.4	103.2
98	17792	2.0	17.1466	1.1	0.7109	3.3	0.0884	3.1	0.94	546.1	16.1	545.3	13.8	541.8	24.0	546.1	16.1	100.8
31	9765	7.5	16.6172	2.2	0.7335	4.8	0.0884	4.2	0.89	546.1	22.1	558.6	20.5	610.0	47.9	546.1	22.1	89.5
396	40085	30.8	17.1479	0.9	0.7114	2.4	0.0885	2.2	0.92	546.5	11.4	545.6	10.0	541.7	20.7	546.5	11.4	100.9
125	24689	0.8	16.9448	0.9	0.7220	3.2	0.0887	3.0	0.96	548.0	16.0	551.9	13.5	567.7	20.2	548.0	16.0	96.5
352	65037	1.4	16.9380	0.7	0.7232	2.1	0.0888	2.0	0.94	548.7	10.6	552.6	9.1	568.5	15.9	548.7	10.6	96.5
341	51573	3.0	16.8947	0.9	0.7263	2.9	0.0890	2.8	0.96	549.6	14.8	554.4	12.5	574.1	18.6	549.6	14.8	95.7
147	19042	1.7	16.7894	0.9	0.7309	2.8	0.0890	2.6	0.95	549.6	13.8	557.1	11.9	587.7	18.9	549.6	13.8	93.5
62	41328	1.8	16.9969	1.3	0.7223	4.1	0.0890	3.9	0.95	549.9	20.3	552.0	17.3	561.0	27.9	549.9	20.3	98.0
277	1295308	3.5	16.5526	0.8	0.7438	2.5	0.0893	2.3	0.95	551.4	12.4	564.6	10.7	618.4	16.7	551.4	12.4	89.2
113	43644	1.4	16.9731	1.1	0.7277	3.2	0.0896	3.0	0.94	553.0	15.9	555.2	13.7	564.0	24.4	553.0	15.9	98.1
602	1233447	2.4	16.9581	0.8	0.7355	2.0	0.0905	1.9	0.92	558.2	10.0	559.8	8.8	566.0	17.8	558.2	10.0	98.6
270	71578	4.6	16.6961	0.8	0.7496	3.0	0.0908	2.9	0.96	560.1	15.3	568.0	12.9	599.7	18.0	560.1	15.3	93.4
75	16156	4.5	16.9598	1.1	0.7380	3.2	0.0908	3.0	0.94	560.1	16.3	561.3	14.0	565.7	24.8	560.1	16.3	99.0
382	102765	18.4	17.0060	0.9	0.7375	2.7	0.0910	2.5	0.94	561.2	13.4	560.9	11.5	559.8	20.4	561.2	13.4	100.2
177	133109	3.6	16.5654	0.8	0.7572	2.6	0.0910	2.5	0.95	561.3	13.4	572.4	11.4	616.7	17.0	561.3	13.4	91.0
450	289027	2.3	16.7528	0.7	0.7510	2.0	0.0912	1.9	0.94	562.9	10.1	568.8	8.7	592.4	14.7	562.9	10.1	95.0
37	60143	10.2	16.4185	1.5	0.7682	4.5	0.0915	4.2	0.94	564.2	22.9	578.7	19.8	636.0	32.1	564.2	22.9	88.7
240	34586	4.4	16.2996	0.7	0.7750	2.4	0.0916	2.3	0.95	565.1	12.3	582.6	10.5	651.6	15.4	565.1	12.3	86.7
673	185254	5.5	17.0242	0.7	0.7444	2.5	0.0919	2.4	0.96	566.9	13.1	565.0	10.9	557.4	16.1	566.9	13.1	101.7
224	80795	1.8	16.7313	0.9	0.7597	3.1	0.0922	2.9	0.95	568.5	15.8	573.9	13.4	595.2	20.2	568.5	15.8	95.5
60	36357	2.9	16.1533	1.1	0.7885	2.9	0.0924	2.7	0.93	569.6	14.9	590.3	13.2	670.9	23.8	569.6	14.9	84.9
221	21674	1.7	17.0056	0.7	0.7492	2.5	0.0924	2.4	0.96	569.8	13.3	567.8	11.0	559.8	15.0	569.8	13.3	101.8
355	40540	1.8	16.7921	0.9	0.7592	2.5	0.0925	2.4	0.94	570.0	13.0	573.5	11.1	587.3	19.1	570.0	13.0	97.1
162	22035	3.0	16.8576	0.9	0.7580	3.4	0.0927	3.3	0.97	571.4	17.8	572.9	14.8	578.9	18.9	571.4	17.8	98.7
301	182910	3.2	16.6898	0.9	0.7664	2.4	0.0928	2.2	0.93	571.9	12.2	577.7	10.5	600.5	18.5	571.9	12.2	95.2
386	132488	6.6	16.9129	0.8	0.7568	2.4	0.0928	2.3	0.95	572.3	12.6	572.2	10.6	571.7	16.9	572.3	12.6	100.1
22	26686	2.1	17.0176	2.1	0.7528	5.6	0.0929	5.1	0.92	572.7	28.1	569.8	24.2	558.3	46.5	572.7	28.1	102.6
326	169606	8.2	16.9488	1.0	0.7563	2.7	0.0930	2.5	0.93	573.0	13.9	571.8	11.9	567.2	21.7	573.0	13.9	101.0
181	76624	2.7	16.5068	0.8	0.7771	3.1	0.0930	3.0	0.97	573.4	16.7	583.8	13.9	624.4	17.0	573.4	16.7	91.8
261	29942	1.5	16.4242	0.8	0.7814	2.9	0.0931	2.8	0.96	573.7	15.5	586.3	13.0	635.2	16.9	573.7	15.5	90.3
98	8391	5.9	16.5452	1.0	0.7792	3.3	0.0935	3.2	0.96	576.2	17.5	585.0	14.8	619.4	21.3	576.2	17.5	93.0
1032	350386	9.6	16.7899	0.8	0.7688	2.3	0.0936	2.1	0.93	576.9	11.7	579.1	10.0	587.6	17.6	576.9	11.7	98.2
174	19794	2.0	16.9169	1.0	0.7656	2.4	0.0939	2.2	0.91	578.8	12.1	577.2	10.6	571.2	22.1	578.8	12.1	101.3
173	33681	6.4	16.7090	1.0	0.7760	2.8	0.0940	2.7	0.94	579.4	14.7	583.2	12.6	598.1	21.0	579.4	14.7	96.9
119	53758	3.2	16.4994	0.9	0.7861	3.5	0.0941	3.4	0.97	579.5	18.7	588.9	15.6	625.3	19.2	579.5	18.7	92.7
791	87891	8.0	16.7452	0.9	0.7803	2.3	0.0948	2.1	0.92	583.7	11.9	585.7	10.3	593.4	19.4	583.7	11.9	98.4
494	100351	18.9	16.7660	0.8	0.7821	2.5	0.0951	2.3	0.95	585.6	13.1	586.7	11.0	590.7	17.1	585.6	13.1	99.1
266	21592	5.1	16.6356	1.1	0.7885	3.1	0.0951	3.0	0.94	585.9	16.6	590.3	14.1	607.6	23.0	585.9	16.6	96.4
135	19882	1.5	16.7088	1.3	0.7871	3.3	0.0954	3.1	0.92	587.3	17.2	589.5	14.8	598.1	27.4	587.3	17.2	98.2
86	133494	1.6	16.1420	1.0	0.8162	3.0	0.0956	2.9	0.95	588.3	16.1	605.9	13.7	672.4	20.4	588.3	16.1	87.5
191	24380	4.6	16.7051	0.7	0.7895	2.3	0.0957	2.2	0.95	588.9	12.4	590.9	10.4	598.6	16.0	588.9	12.4	98.4
404	338425	0.9	16.8276	0.9	0.7838	2.8	0.0957	2.7	0.95	588.9	15.2	587.6	12.7	582.7	19.4	588.9	15.2	101.1
42	24009	2.0	16.5841	1.6	0.7979	4.3	0.0960	3.9	0.93	590.7	22.2	595.6	19.2	614.3	34.9	590.7	22.2	96.2
1270	312207	15.5	16.8431	0.7	0.7887	2.2	0.0963	2.1	0.95	593.0	11.9	590.4	9.9	580.7	14.8	593.0	11.9	102.1
321	31105	3.0	16.6937	0.8	0.7960	2.0	0.0964	1.9	0.92	593.2	10.6	594.6	9.2	600.0	17.7	593.2	10.6	98.9
125	48563	2.4	16.6486	1.3	0.8014	3.6	0.0968	3.3	0.93	595.4	19.0	597.6	16.3	605.9	29.0	595.4	19.0	98.3
261	113332	0.9	16.4592	0.9	0.8147	2.7	0.0973	2.5	0.94	598.3	14.4	605.1	12.3	630.6	20.3	598.3	14.4	94.9
289	45330	1.7	16.7473	0.7	0.8009	2.4	0.0973	2.3	0.96	598.5	13.3	597.3	11.0	593.1	15.6	598.5	13.3	100.9
1216	267350	6.8	16.6583	0.7	0.8057	2.2	0.0973	2.1	0.95	598.8	11.9	600.0	9.9	604.6	14.2	598.8	11.9	99.0
220	84031	1.1	16.5192	0.8	0.8136	3.1	0.0975	3.0	0.97	599.6	17.3	604.5	14.2	622.8	16.4	599.6	17.3	96.3
508	247913	4.0	16.6084	0.7	0.8094	1.8	0.0975	1.7	0.93	599.7	9.8	602.1	8.4	611.1	14.9	599.7	9.8	98.1
190	30401	2.7	16.4030	0.9	0.8203	2.3	0.0976	2.1	0.92	600.2	12.1	608.2	10.5	638.0	19.4	600.2	12.1	94.1
214	95682	5.3	16.2068	1.0	0.8312	2.9	0.0977	2.7	0.94	601.0	15.6	614.3	13.3	663.8	21.1	601.0	15.6	90.5
156	31118	2.8	16.0046	1.0	0.8435	2.8	0.0979	2.6	0.94	602.1	15.1	621.0	13.1	690.7	21.1	602.1	15.1	87.2
452	142955	3.2	16.6035	0.9	0.8134	2.9	0.0980	2.8	0.95	602.4	15.9	604.4	13.3	611.8	20.2	602.4	15.9	98.5
370	80740	2.7	16.6287	0.8	0.8122	2.7	0.0980	2.6	0.96	602.4	15.0	603.7	12.4	608.5	17.3	602.4	15.0	99.0
790	258997	3.5	16.7197	0.9	0.8117	2.4	0.0984	2.2	0.93	605.2	12.8	603.4	10.9	596.7	19.2	605.2	12.8	101.4
219	102127	6.9	16.5221	1.0	0.8232	2.7	0.0986	2.5	0.93	606.5	14.5	609.9	12.3	622.4	21.6	606.5	14.5	97.4
135	32044	3.1	16.5845	0.9	0.8230	2.6	0.0990	2.4	0.93	608.5	14.0	609.7	11.9	614.2	20.4	608.5	14.0	99.1
431	758819	4.8	16.5254	0.8	0.8266	2.0	0.0991	1.8	0.91	609.0	10.6	611.7	9.1	621.9	17.4	609.0	10.6	97.9
139	15778	1.2	16.7614	1.0	0.8156	3.2	0.0991	3.1	0.95	609.4	17.8	605.6	14.7	591.3	22.6	609.4	17.8	103.1

19	316482	0.9	15.9504	2.5	0.8574	6.7	0.0992	6.2	0.93	609.7	36.2	628.7	31.4	697.9	52.8	609.7	36.2	87.4
785	9274440	3.6	16.6189	0.8	0.8244	2.0	0.0994	1.8	0.92	610.7	10.5	610.5	9.0	609.8	17.1	610.7	10.5	100.2
240	62945	2.5	16.5095	0.6	0.8336	2.7	0.0998	2.7	0.98	613.3	15.7	615.6	12.7	624.0	13.0	613.3	15.7	98.3
104	45835	3.3	16.2956	1.0	0.8456	3.0	0.0999	2.8	0.94	614.1	16.2	622.3	13.7	652.1	21.9	614.1	16.2	94.2
89	16620	3.1	16.4967	1.2	0.8357	2.8	0.1000	2.6	0.91	614.4	15.0	616.8	13.0	625.7	24.9	614.4	15.0	98.2
91	73975	6.6	16.5470	1.0	0.8365	3.0	0.1004	2.8	0.95	616.7	16.7	617.2	13.9	619.1	21.1	616.7	16.7	99.6
109	160311	4.3	16.1207	1.0	0.8590	3.0	0.1004	2.8	0.94	616.9	16.7	629.6	14.1	675.2	21.2	616.9	16.7	91.4
89	10796	1.3	16.6184	1.4	0.8346	3.2	0.1006	2.8	0.89	617.9	16.5	616.2	14.6	609.8	30.9	617.9	16.5	101.3
504	165764	2.9	16.3633	0.8	0.8514	2.4	0.1010	2.3	0.94	620.5	13.5	625.4	11.3	643.2	17.4	620.5	13.5	96.5
183	122986	4.2	16.3244	0.8	0.8578	2.8	0.1016	2.6	0.96	623.5	15.7	628.9	12.9	648.3	16.4	623.5	15.7	96.2
294	70428	2.8	16.2223	0.9	0.8646	2.5	0.1017	2.3	0.93	624.5	13.9	632.6	11.9	661.7	20.1	624.5	13.9	94.4
141	40375	2.1	16.1529	0.9	0.8688	3.1	0.1018	2.9	0.95	624.8	17.5	634.9	14.6	670.9	19.9	624.8	17.5	93.1
170	42867	1.8	16.4474	1.0	0.8561	3.2	0.1021	3.1	0.95	626.8	18.3	628.0	15.1	632.2	20.8	626.8	18.3	99.2
84	37630	1.2	15.9306	1.2	0.8850	3.1	0.1023	2.9	0.93	627.6	17.5	643.7	15.0	700.5	24.8	627.6	17.5	89.6
202	59835	4.4	16.3963	0.9	0.8642	2.5	0.1028	2.3	0.93	630.6	13.7	632.4	11.6	638.9	19.6	630.6	13.7	98.7
197	52344	3.6	16.2558	1.0	0.8744	3.5	0.1031	3.3	0.96	632.5	20.1	638.0	16.4	657.4	20.6	632.5	20.1	96.2
214	47198	3.8	16.3220	1.1	0.8718	3.0	0.1032	2.8	0.94	633.1	17.1	636.5	14.3	648.6	22.7	633.1	17.1	97.6
55	11361	1.2	16.1101	1.0	0.8837	3.7	0.1032	3.5	0.96	633.4	21.3	643.0	17.5	676.6	21.7	633.4	21.3	93.6
375	107542	4.4	16.3820	0.8	0.8696	2.6	0.1033	2.4	0.94	633.8	14.8	635.3	12.2	640.8	18.2	633.8	14.8	98.9
504	68902	3.1	16.2383	0.8	0.8789	2.3	0.1035	2.2	0.94	635.0	13.3	640.4	11.0	659.6	16.4	635.0	13.3	96.3
267	147898	3.4	16.1494	0.8	0.8843	1.9	0.1036	1.7	0.90	635.3	10.2	643.3	9.0	671.4	17.9	635.3	10.2	94.6
218	31465	2.7	16.2479	0.8	0.8794	2.7	0.1036	2.5	0.96	635.6	15.4	640.7	12.7	658.4	16.9	635.6	15.4	96.5
305	96316	2.8	16.3646	1.0	0.8744	2.9	0.1038	2.8	0.94	636.5	16.7	637.9	13.9	643.0	22.1	636.5	16.7	99.0
392	1130551	3.3	16.2061	0.7	0.8835	2.4	0.1038	2.3	0.95	636.9	14.1	642.9	11.6	663.9	15.5	636.9	14.1	95.9
81	20179	2.6	16.1500	1.0	0.8866	2.9	0.1038	2.7	0.94	636.9	16.3	644.5	13.7	671.3	21.7	636.9	16.3	94.9
119	1500917	1.9	16.2043	1.0	0.8843	2.8	0.1039	2.6	0.93	637.4	15.7	643.3	13.2	664.2	21.4	637.4	15.7	96.0
100	22072	2.1	16.0576	1.0	0.8938	3.4	0.1041	3.2	0.95	638.3	19.6	648.4	16.3	683.6	22.2	638.3	19.6	93.4
135	24710	1.9	16.4360	1.1	0.8734	3.1	0.1041	2.9	0.94	638.5	17.7	637.4	14.7	633.7	23.3	638.5	17.7	100.8
256	1105065	2.8	16.2757	0.9	0.8836	2.5	0.1043	2.4	0.93	639.6	14.4	642.9	12.1	654.7	19.4	639.6	14.4	97.7
838	136384	8.9	16.2810	0.8	0.8852	2.1	0.1045	1.9	0.93	640.9	11.8	643.8	9.9	654.0	16.2	640.9	11.8	98.0
157	61224	3.3	16.1956	0.9	0.8899	3.0	0.1045	2.9	0.95	640.9	17.6	646.3	14.5	665.3	19.6	640.9	17.6	96.3
675	269477	23.4	16.2798	0.8	0.8856	2.6	0.1046	2.5	0.96	641.1	15.2	644.0	12.4	654.2	16.2	641.1	15.2	98.0
185	118558	2.1	16.2215	1.2	0.8907	2.5	0.1048	2.2	0.87	642.4	13.2	646.8	11.8	661.8	25.7	642.4	13.2	97.1
736	144061	5.1	16.2609	0.6	0.8902	2.0	0.1050	1.9	0.95	643.5	11.6	646.5	9.6	656.7	13.8	643.5	11.6	98.0
410	367181	3.1	16.2880	0.8	0.8892	2.3	0.1050	2.2	0.94	643.9	13.2	645.9	11.0	653.1	17.4	643.9	13.2	98.6
80	7096433	2.4	16.0702	1.1	0.9023	3.1	0.1052	2.9	0.93	644.6	17.5	653.0	14.7	681.9	23.3	644.6	17.5	94.5
111	35389556	3.9	16.2270	1.1	0.8945	3.4	0.1053	3.3	0.95	645.2	20.0	648.8	16.4	661.1	23.1	645.2	20.0	97.6
181	126928	3.9	16.2443	0.9	0.8944	2.6	0.1054	2.4	0.93	645.8	14.8	648.7	12.4	658.9	20.0	645.8	14.8	98.0
165	27711	1.7	16.2958	1.1	0.8934	3.2	0.1056	3.0	0.93	647.1	18.2	648.2	15.2	652.1	24.2	647.1	18.2	99.2
485	1285879	4.9	16.2338	0.9	0.8975	2.3	0.1057	2.1	0.92	647.6	13.2	650.4	11.2	660.2	19.4	647.6	13.2	98.1
433	898357	4.3	16.4351	1.0	0.8883	2.5	0.1059	2.3	0.92	648.8	14.2	645.5	11.9	633.8	20.8	648.8	14.2	102.4
72	29206	2.6	16.0456	1.2	0.9112	2.9	0.1060	2.6	0.91	649.7	16.3	657.7	14.0	685.2	25.2	649.7	16.3	94.8
177	200371	3.7	16.0505	1.0	0.9133	2.4	0.1063	2.2	0.91	651.3	13.4	658.8	11.6	684.6	21.6	651.3	13.4	95.1
186	37776	11.3	15.5061	1.1	0.9483	2.7	0.1066	2.5	0.91	653.2	15.3	677.2	13.3	757.8	23.0	653.2	15.3	86.2
216	57656	3.1	16.4846	0.9	0.8926	3.0	0.1067	2.8	0.95	653.7	17.6	647.8	14.2	627.3	19.1	653.7	17.6	104.2
191	36481	5.4	16.2004	0.8	0.9089	2.5	0.1068	2.4	0.94	654.1	14.9	656.5	12.3	664.7	17.8	654.1	14.9	98.4
378	82810	9.6	16.1195	0.8	0.9148	3.0	0.1069	2.9	0.97	655.0	17.9	659.6	14.4	675.4	16.5	655.0	17.9	97.0
98	23109	2.3	16.2814	1.0	0.9072	2.7	0.1071	2.5	0.92	656.0	15.5	655.6	13.0	653.9	22.2	656.0	15.5	100.3
499	43570	1.6	16.1915	0.6	0.9241	2.3	0.1085	2.2	0.96	664.1	13.9	664.5	11.2	665.8	13.5	664.1	13.9	99.7
140	75732	2.1	16.0667	0.9	0.9338	3.0	0.1088	2.9	0.95	665.9	18.1	669.6	14.7	682.4	19.5	665.9	18.1	97.6
282	58967	1.5	16.3514	0.8	0.9195	2.1	0.1090	1.9	0.93	667.2	12.3	662.1	10.2	644.8	16.8	667.2	12.3	103.5
140	57009	2.8	15.5730	0.9	0.9674	2.8	0.1093	2.6	0.94	668.5	16.6	687.1	13.8	748.7	19.4	668.5	16.6	89.3
162	95071	3.7	14.9708	0.9	1.0133	3.1	0.1100	2.9	0.95	672.9	18.6	710.6	15.7	831.4	19.4	672.9	18.6	80.9
821	135380	12.5	15.8174	0.9	0.9608	2.8	0.1102	2.6	0.94	674.1	16.8	683.7	13.9	715.7	19.4	674.1	16.8	94.2
178	189233	4.4	16.2700	0.8	0.9366	2.7	0.1105	2.6	0.96	675.8	16.9	671.1	13.5	655.5	16.3	675.8	16.9	103.1
140	4487271	7.1	15.6678	1.1	0.9755	3.7	0.1108	3.5	0.95	677.7	22.4	691.3	18.3	735.9	23.6	677.7	22.4	92.1
202	448156	2.2	15.2071	0.8	1.0061	2.5	0.1110	2.4	0.95	678.4	15.2	706.9	12.6	798.7	16.0	678.4	15.2	84.9
499	62575	5.1	16.1405	0.8	0.9481	2.2	0.1110	2.1	0.94	678.5	13.5	677.1	11.0	672.6	16.5	678.5	13.5	100.9
135	190116	3.1	16.0529	0.9	0.9609	2.8	0.1119	2.6	0.94	683.6	17.1	683.8	13.9	684.2	20.0	683.6	17.1	99.9
75	58070	1.5	16.1047	1.2	0.9873	3.1	0.1153	2.9	0.93	703.6	19.5	697.3	15.9	677.3	24.7	703.6	19.5	103.9
420	144896	6.7	16.0157	0.6	1.0008	2.7	0.1162	2.6	0.97	708.9	17.7	704.2	13.7	689.2	13.1	708.9	17.7	102.9
253	121796	2.9	14.9103	0.9	1.0784	2.5	0.1166	2.3	0.93	711.0	15.4	742.8	13.0	839.9	19.2	711.0	15.4	84.7
136	82143	2.6	15.6183	0.9	1.0365	2.4	0.1174	2.2	0.92	715.6	14.8	722.2	12.3	742.5	20.1	715.6	14.8	96.4

175	35541	2.7	15.7667	0.8	1.0272	3.1	0.1175	3.0	0.97	715.9	20.6	717.5	16.1	722.5	16.9	715.9	20.6	99.1
363	372056	17.1	15.5453	0.8	1.0428	2.3	0.1176	2.1	0.94	716.6	14.5	725.3	11.8	752.4	16.3	716.6	14.5	95.2
342	247205	8.1	15.2070	1.0	1.0681	3.1	0.1178	2.9	0.95	717.9	19.9	737.8	16.2	798.7	21.0	717.9	19.9	89.9
182	43378	2.1	14.7444	0.8	1.1190	2.8	0.1197	2.7	0.96	728.6	18.6	762.5	15.1	863.2	15.9	728.6	18.6	84.4
177	60922	0.7	15.8788	0.9	1.0402	3.7	0.1198	3.6	0.97	729.4	24.6	724.0	19.0	707.4	18.7	729.4	24.6	103.1
176	45785	1.6	14.5581	0.8	1.1546	2.2	0.1219	2.0	0.93	741.5	14.1	779.4	11.8	889.5	16.7	741.5	14.1	83.4
69	11145	4.2	14.4973	1.0	1.1674	3.9	0.1227	3.8	0.96	746.3	26.7	785.4	21.5	898.1	21.5	746.3	26.7	83.1
602	96874	1.5	14.7821	0.8	1.1644	2.1	0.1248	1.9	0.92	758.3	13.9	784.0	11.5	857.8	17.0	758.3	13.9	88.4
60	146444	1.6	14.6809	1.0	1.1725	3.8	0.1248	3.7	0.96	758.4	26.2	787.8	20.8	872.1	21.1	758.4	26.2	87.0
225	44001	4.5	14.5848	0.9	1.1998	2.3	0.1269	2.2	0.92	770.3	15.6	800.5	12.9	885.7	18.6	770.3	15.6	87.0
167	34279	2.7	15.2914	1.0	1.1552	3.0	0.1281	2.9	0.94	777.1	21.0	779.7	16.6	787.1	21.5	777.1	21.0	98.7
170	29165	1.8	14.6995	1.1	1.2029	3.2	0.1282	3.0	0.94	777.8	21.8	801.9	17.6	869.5	22.8	777.8	21.8	89.5
112	22698	2.2	14.5111	0.9	1.2366	2.8	0.1301	2.7	0.95	788.7	19.9	817.3	16.0	896.1	19.1	788.7	19.9	88.0
147	17891	1.9	14.0393	1.0	1.2951	3.1	0.1319	2.9	0.94	798.5	21.7	843.5	17.6	964.0	21.0	798.5	21.7	82.8
210	53395	2.5	14.3188	0.8	1.2716	2.5	0.1321	2.4	0.95	799.6	17.8	833.1	14.2	923.6	16.8	799.6	17.8	86.6
174	29865	2.1	14.5559	1.0	1.2769	2.5	0.1348	2.3	0.91	815.2	17.6	835.5	14.3	889.7	21.2	815.2	17.6	91.6
105	34200	3.0	14.2800	1.1	1.3169	2.9	0.1364	2.7	0.93	824.2	21.3	853.2	17.0	929.2	21.6	824.2	21.3	88.7
199	52578	1.8	14.2005	0.8	1.3496	2.7	0.1390	2.5	0.95	839.0	20.0	867.4	15.6	940.6	17.4	839.0	20.0	89.2
148	26751	1.7	14.5528	0.9	1.3358	4.6	0.1410	4.5	0.98	850.2	36.2	861.4	26.9	890.2	18.3	850.2	36.2	95.5
33	1494420	3.2	14.3429	1.3	1.3610	3.7	0.1416	3.5	0.93	853.6	27.9	872.3	21.9	920.2	27.5	853.6	27.9	92.8
390	296278	10.6	14.4106	0.8	1.3590	2.6	0.1420	2.5	0.96	856.2	20.1	871.5	15.3	910.4	15.6	856.2	20.1	94.0
170	67896	3.1	14.5512	1.0	1.3601	3.0	0.1435	2.8	0.94	864.7	22.6	871.9	17.3	890.4	20.0	864.7	22.6	97.1
628	136079	5.3	14.8049	0.6	1.3497	1.8	0.1449	1.6	0.93	872.4	13.4	867.4	10.2	854.6	12.9	872.4	13.4	102.1
175	63999	3.7	14.0433	0.9	1.3984	3.1	0.1424	3.0	0.96	858.4	23.9	888.2	18.4	963.4	18.4	963.4	18.4	89.1
261	85150	3.1	14.0168	0.9	1.5135	2.5	0.1539	2.3	0.94	922.6	20.0	935.8	15.2	967.3	17.7	967.3	17.7	95.4
305	76831	17.3	13.9619	0.9	1.4905	3.0	0.1509	2.9	0.96	906.2	24.3	926.5	18.3	975.3	17.9	975.3	17.9	92.9
246	103585	3.6	13.9360	0.8	1.6299	2.4	0.1647	2.3	0.95	983.1	20.9	981.8	15.2	979.0	15.3	979.0	15.3	100.4
346	224419	4.1	13.8682	0.5	1.5883	2.3	0.1598	2.2	0.97	955.4	19.7	965.6	14.2	989.0	11.1	989.0	11.1	96.6
213	226018	3.4	13.8573	0.9	1.5829	3.3	0.1591	3.1	0.96	951.7	27.7	963.5	20.3	990.6	19.1	990.6	19.1	96.1
136	53815	1.1	13.8424	1.1	1.5135	4.4	0.1520	4.3	0.97	911.9	36.2	935.9	26.9	992.8	22.3	992.8	22.3	91.9
280	1463847	3.0	13.8341	0.9	1.6321	3.0	0.1638	2.8	0.95	977.6	25.5	982.7	18.6	994.0	18.4	994.0	18.4	98.4
247	557326	4.3	13.8109	0.9	1.4944	3.4	0.1497	3.3	0.97	899.2	27.3	928.1	20.5	997.4	17.8	997.4	17.8	90.2
56	29335	1.9	13.7514	1.1	1.5893	3.7	0.1585	3.5	0.95	948.5	31.0	966.0	22.9	1006.1	22.3	1006.1	22.3	94.3
92	40113	2.8	13.6693	0.9	1.5648	3.8	0.1551	3.7	0.97	929.7	31.8	956.4	23.5	1018.3	18.6	1018.3	18.6	91.3
225	201492	1.4	13.5619	1.2	1.7052	2.9	0.1677	2.6	0.90	999.5	23.9	1010.5	18.3	1034.2	24.8	1034.2	24.8	96.6
42	13231	1.4	13.5471	0.9	1.8274	3.8	0.1795	3.7	0.97	1064.5	36.4	1055.3	25.1	1036.4	18.6	1036.4	18.6	102.7
35	122634	0.9	13.5375	1.1	1.6626	4.8	0.1632	4.6	0.97	974.8	41.9	994.4	30.2	1037.9	22.9	1037.9	22.9	93.9
108	29664	1.9	13.5186	1.0	1.7032	3.3	0.1670	3.2	0.96	995.5	29.5	1009.8	21.4	1040.7	19.5	1040.7	19.5	95.7
113	68635	1.4	13.5123	1.0	1.6056	3.3	0.1573	3.2	0.96	942.0	27.7	972.4	20.7	1041.6	19.4	1041.6	19.4	90.4
50	7283	3.6	13.4943	0.9	1.6990	3.3	0.1663	3.2	0.96	991.6	29.5	1008.1	21.3	1044.3	18.2	1044.3	18.2	94.9
45	12727	1.5	13.4905	1.2	1.8593	3.8	0.1819	3.6	0.95	1077.4	35.4	1066.7	24.9	1044.9	24.7	1044.9	24.7	103.1
171	37844	1.5	13.4700	0.6	1.8330	2.8	0.1791	2.7	0.98	1061.9	26.6	1057.4	18.3	1048.0	11.6	1048.0	11.6	101.3
216	45787	1.6	13.4613	1.4	1.4789	3.0	0.1444	2.6	0.88	869.4	21.5	921.8	18.1	1049.3	28.4	1049.3	28.4	82.9
309	881414	2.4	13.4535	0.8	1.8314	2.4	0.1787	2.3	0.94	1059.9	22.4	1056.8	16.0	1050.5	16.7	1050.5	16.7	100.9
196	39894	1.6	13.3889	0.9	1.7896	2.2	0.1738	2.0	0.91	1032.9	19.0	1041.7	14.3	1060.2	18.4	1060.2	18.4	97.4
162	29205	1.1	13.3612	0.8	1.8126	2.9	0.1756	2.7	0.96	1043.2	26.5	1050.0	18.8	1064.3	17.0	1064.3	17.0	98.0
127	52783	2.6	13.3594	0.9	1.7500	2.4	0.1696	2.2	0.92	1009.7	20.9	1027.2	15.6	1064.6	18.6	1064.6	18.6	94.8
126	73396	2.6	13.3549	0.9	1.8273	2.7	0.1770	2.5	0.94	1050.5	24.3	1055.3	17.6	1065.3	18.7	1065.3	18.7	98.6
114	49865	2.2	13.2803	0.9	1.8624	3.0	0.1794	2.9	0.95	1063.6	28.3	1067.8	20.0	1076.5	18.0	1076.5	18.0	98.8
219	120786	7.3	13.2459	0.9	1.8414	3.4	0.1769	3.3	0.97	1050.0	32.0	1060.4	22.5	1081.7	17.3	1081.7	17.3	97.1
62	30784	1.0	13.2435	1.0	1.7179	3.2	0.1650	3.1	0.95	984.6	28.2	1015.3	20.8	1082.1	19.5	1082.1	19.5	91.0
220	103955	4.7	13.1822	0.9	1.7474	2.3	0.1671	2.1	0.92	995.9	19.5	1026.2	14.9	1091.4	18.3	1091.4	18.3	91.3
366	166118	1.5	13.1711	0.9	1.8367	2.3	0.1755	2.2	0.92	1042.1	20.8	1058.7	15.4	1093.0	18.4	1093.0	18.4	95.3
122	31115	0.9	13.1634	0.8	1.8077	3.1	0.1726	3.0	0.96	1026.3	28.3	1048.2	20.3	1094.2	16.8	1094.2	16.8	93.8
202	63414	3.0	13.1561	0.7	1.9184	3.1	0.1831	3.0	0.97	1083.6	30.2	1087.5	20.8	1095.4	14.9	1095.4	14.9	98.9
698	26524	3.1	13.0953	0.7	1.6773	2.1	0.1593	1.9	0.93	952.9	17.1	999.9	13.1	1104.6	14.7	1104.6	14.7	86.3
44	53025	1.4	13.0770	1.3	1.8027	4.4	0.1710	4.1	0.95	1017.5	39.0	1046.4	28.5	1107.4	26.6	1107.4	26.6	91.9
288	214568	17.7	13.0500	0.8	1.7500	2.8	0.1656	2.7	0.96	988.0	24.6	1027.2	18.1	1111.5	15.8	1111.5	15.8	88.9
165	1910472	1.6	13.0352	1.0	1.9948	2.0	0.1886	1.7	0.87	1113.7	17.5	1113.8	13.3	1113.8	19.2	1113.8	19.2	100.0
52	48217	1.1	12.8671	1.1	1.9253	4.1	0.1797	4.0	0.97	1065.2	39.0	1089.9	27.5	1139.6	21.2	1139.6	21.2	93.5
432	173726	9.4	12.7998	0.8	2.0924	2.5	0.1942	2.4	0.94	1144.3	24.7	1146.3	17.2	1150.1	16.7	1150.1	16.7	99.5
173	82886	2.0	12.7976	0.9	2.1409	3.6	0.1987	3.5	0.97	1168.4	37.3	1162.1	24.9	1150.4	17.4	1150.4	17.4	101.6
33	21606	3.9	12.7887	1.3	1.9127	5.3	0.1774	5.2	0.97	1052.8	50.2	1085.5	35.5	1151.8	25.2	1151.8	25.2	91.4

33	21606	3.9	12.7887	1.3	1.9127	5.3	0.1774	5.2	0.97	1052.8	50.2	1085.5	35.5	1151.8	25.2	1151.8	25.2	91.4
238	553148	1.8	12.6552	0.7	2.2389	2.2	0.2055	2.0	0.94	1204.8	22.4	1193.3	15.3	1172.6	14.9	1172.6	14.9	102.7
170	56032	1.9	12.6530	0.9	2.1191	3.1	0.1945	3.0	0.95	1145.5	31.1	1155.1	21.4	1173.0	18.2	1173.0	18.2	97.7
123	15653	2.7	12.6253	0.8	2.0739	2.5	0.1899	2.4	0.95	1120.9	24.8	1140.2	17.4	1177.3	16.3	1177.3	16.3	95.2
84	19356	2.7	12.4048	0.9	2.2038	2.9	0.1983	2.8	0.95	1166.0	29.8	1182.3	20.5	1212.1	18.0	1212.1	18.0	96.2
293	136320	1.4	12.4020	0.8	2.2913	2.9	0.2061	2.7	0.96	1208.0	30.0	1209.6	20.2	1212.5	16.5	1212.5	16.5	99.6
156	167336	2.3	12.3605	0.9	2.2142	2.9	0.1985	2.8	0.95	1167.2	29.5	1185.5	20.3	1219.1	17.8	1219.1	17.8	95.7
62	34817	1.0	12.3101	1.3	1.8826	4.0	0.1681	3.8	0.94	1001.5	35.0	1075.0	26.5	1227.1	25.9	1227.1	25.9	81.6
80	63581	1.0	11.5895	0.9	2.6875	3.0	0.2259	2.8	0.95	1313.0	33.8	1325.0	22.2	1344.6	18.2	1344.6	18.2	97.7
99	31289	2.1	11.0248	0.6	2.9852	3.2	0.2387	3.1	0.98	1379.9	38.3	1403.8	24.0	1440.4	12.4	1440.4	12.4	95.8
155	165989	1.4	11.0203	0.9	3.1114	2.6	0.2487	2.4	0.94	1431.7	31.2	1435.5	20.0	1441.2	17.2	1441.2	17.2	99.3
72	68721	1.8	9.7865	0.8	3.9799	3.0	0.2825	2.9	0.96	1603.9	41.5	1630.1	24.6	1664.1	15.3	1664.1	15.3	96.4
289	482755	2.8	9.7643	0.9	3.9241	2.6	0.2779	2.4	0.94	1580.7	33.7	1618.7	20.7	1668.3	16.0	1668.3	16.0	94.8
62	204729	1.1	8.7198	0.8	5.1903	3.3	0.3282	3.2	0.97	1829.9	51.1	1851.0	28.2	1874.9	14.7	1874.9	14.7	97.6
263	231082	2.9	8.1866	0.9	5.8011	3.1	0.3444	3.0	0.96	1908.0	49.0	1946.6	26.7	1987.9	15.3	1987.9	15.3	96.0
402	309639	2.7	7.3647	0.7	7.0363	2.2	0.3758	2.1	0.95	2056.8	36.9	2116.0	19.7	2174.1	12.4	2174.1	12.4	94.6
150	112744	1.0	6.6077	0.8	7.6238	3.2	0.3654	3.1	0.97	2007.5	52.7	2187.7	28.4	2361.1	14.0	2361.1	14.0	85.0
524	31730	2.1	6.2021	0.9	9.2950	2.2	0.4181	2.0	0.91	2251.9	37.7	2367.5	20.0	2468.6	15.3	2468.6	15.3	91.2
49	89949	1.8	5.9960	1.0	10.6276	4.6	0.4622	4.4	0.98	2449.1	90.4	2491.1	42.3	2525.5	16.9	2525.5	16.9	97.0
153	242326	2.1	5.4657	0.8	12.3484	2.8	0.4895	2.6	0.95	2568.5	56.0	2631.3	26.1	2679.9	13.9	2679.9	13.9	95.8
134	170461	1.2	5.3939	0.7	13.0601	2.9	0.5109	2.8	0.97	2660.5	62.0	2684.0	27.7	2701.7	11.8	2701.7	11.8	98.5
692	10605149	4.8	4.9516	0.7	14.6626	2.4	0.5266	2.3	0.95	2727.0	51.5	2793.6	23.1	2842.1	12.1	2842.1	12.1	96.0
30	23244	1.0	4.8661	0.7	15.1849	4.1	0.5359	4.0	0.98	2766.3	90.8	2826.9	39.1	2870.4	11.6	2870.4	11.6	96.4
144	204858	1.5	4.3821	0.6	18.3931	2.8	0.5846	2.8	0.98	2967.4	65.5	3010.5	27.2	3039.5	9.9	3039.5	9.9	97.6
115	4358313	0.5	4.3347	0.7	19.6753	3.4	0.6186	3.3	0.98	3104.2	82.1	3075.5	32.9	3056.9	10.6	3056.9	10.6	101.5
121	237036	2.1	4.2970	0.7	19.0070	2.8	0.5924	2.7	0.97	2999.0	64.1	3042.2	26.7	3070.8	11.6	3070.8	11.6	97.7
278	204875	3.9	4.0843	0.6	18.9715	2.1	0.5620	2.0	0.95	2874.8	45.4	3040.4	19.9	3151.7	10.1	3151.7	10.1	91.2
393	2293983	1.4	3.7588	0.6	23.5539	2.6	0.6421	2.5	0.97	3197.3	63.1	3250.1	25.1	3282.8	9.8	3282.8	9.8	97.4

Stephenson Bastion

					Isotope ratios					Apparent ages (Ma)								
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
104	84635	13.0	17.2812	1.0	0.6488	2.3	0.0813	2.0	0.90	503.9	9.8	507.7	9.0	524.7	21.9	503.9	9.8	96.0
289	33471	6.0	17.4186	0.9	0.6463	2.1	0.0816	1.9	0.90	505.9	9.1	506.2	8.2	507.3	19.5	505.9	9.1	99.7
278	59798	3.5	17.4682	0.8	0.6553	2.6	0.0830	2.5	0.95	514.1	12.2	511.7	10.4	501.1	17.1	514.1	12.2	102.6
155	163858	1.9	17.3413	0.9	0.6731	2.4	0.0847	2.2	0.93	523.9	11.3	522.6	9.8	517.1	19.1	523.9	11.3	101.3
287	525678	3.9	17.0512	0.8	0.6907	2.5	0.0854	2.3	0.94	528.4	11.8	533.2	10.2	554.0	17.7	528.4	11.8	95.4
46	114674	2.5	16.8969	1.3	0.6977	4.1	0.0855	3.9	0.95	528.9	19.8	537.4	17.2	573.8	29.0	528.9	19.8	92.2
204	128561	4.4	17.1811	1.0	0.6931	3.0	0.0864	2.9	0.95	534.0	14.8	534.6	12.6	537.4	21.0	534.0	14.8	99.4
340	355611	3.7	16.8589	0.7	0.7096	2.4	0.0868	2.3	0.96	536.3	11.8	544.5	10.1	578.7	15.4	536.3	11.8	92.7
275	78799	3.8	16.8845	0.9	0.7182	2.6	0.0879	2.5	0.95	543.4	13.0	549.6	11.2	575.4	18.6	543.4	13.0	94.4
133	275234	7.1	16.9738	1.0	0.7221	2.5	0.0889	2.3	0.92	549.0	12.0	551.9	10.6	563.9	21.6	549.0	12.0	97.4
389	746493	7.7	17.0685	0.7	0.7216	2.1	0.0893	2.0	0.94	551.6	10.5	551.6	9.0	551.8	15.9	551.6	10.5	100.0
193	56235	1.9	16.3969	1.0	0.8448	3.2	0.1005	3.0	0.95	617.1	17.6	621.8	14.7	638.8	22.1	617.1	17.6	96.6
105	70188	4.7	15.6136	0.9	0.9150	2.9	0.1036	2.8	0.95	635.5	16.8	659.7	14.2	743.2	19.0	635.5	16.8	85.5
276	100976	4.1	16.1620	0.9	0.9062	2.8	0.1062	2.7	0.95	650.8	16.5	655.0	13.6	669.8	18.9	650.8	16.5	97.2
192	421527	15.6	14.8341	0.9	1.1548	2.6	0.1242	2.4	0.94	754.9	17.2	779.5	14.0	850.5	18.7	754.9	17.2	88.8
342	226532	13.0	13.8732	0.7	1.5174	3.6	0.1527	3.5	0.98	915.9	29.9	937.4	21.8	988.2	13.2	988.2	13.2	92.7
39	16738	0.7	11.0677	1.0	3.1515	2.9	0.2530	2.7	0.94	1453.8	35.8	1445.4	22.6	1433.0	19.5	1433.0	19.5	101.5
186	49645	1.9	11.0053	0.8	2.9865	2.7	0.2384	2.6	0.95	1378.3	31.7	1404.2	20.4	1443.8	15.2	1443.8	15.2	95.5
210	411058	2.5	10.9823	0.8	3.1846	2.5	0.2537	2.3	0.95	1457.3	30.3	1453.4	18.9	1447.7	15.0	1447.7	15.0	100.7
43	17210	0.9	10.9514	1.0	3.2835	4.4	0.2608	4.3	0.98	1493.9	57.5	1477.2	34.4	1453.1	18.7	1453.1	18.7	102.8
39	16331	1.4	10.9483	0.8	3.1816	3.4	0.2526	3.3	0.97	1452.1	42.9	1452.7	26.3	1453.7	16.1	1453.7	16.1	99.9
119	62869	1.6	10.9425	1.3	3.0208	4.0	0.2397	3.8	0.95	1385.4	46.8	1412.9	30.2	1454.7	24.2	1454.7	24.2	95.2
81	57618	1.2	10.9236	0.7	3.1922	2.7	0.2529	2.6	0.96	1453.4	33.3	1455.3	20.5	1457.9	13.3	1457.9	13.3	99.7
61	56977	0.7	10.8897	0.9	3.2748	2.9	0.2586	2.8	0.95	1482.9	36.9	1475.1	22.8	1463.8	17.5	1463.8	17.5	101.3
246	32064	2.0	10.8559	0.8	2.7947	3.0	0.2200	2.9	0.96	1282.1	33.8	1354.1	22.6	1469.8	15.7	1469.8	15.7	87.2
88	28927	2.1	10.8287	0.8	3.2423	2.7	0.2546	2.6	0.95	1462.4	33.4	1467.3	20.8	1474.5	15.1	1474.5	15.1	99.2
80	12843375	1.1	10.7923	0.8	3.1941	3.0	0.2500	2.9	0.96	1438.5	37.7	1455.7	23.5	1480.9	15.5	1480.9	15.5	97.1
112	65419	1.8	10.7867	0.7	3.3210	2.9	0.2598	2.8	0.97	1488.9	37.4	1486.0	22.6	1481.9	12.7	1481.9	12.7	100.5
84	52790	1.3	10.7822	0.8	3.3412	2.7	0.2613	2.6	0.96	1496.4	35.0	1490.7	21.4	1482.7	15.0	1482.7	15.0	100.9
183	127637	1.3	10.7436	0.6	3.1978	2.4	0.2492	2.3	0.97	1434.2	29.3	1456.6	18.2	1489.5	11.2	1489.5	11.2	96.3
200	20820	1.9	10.7386	0.7	2.8098	2.3	0.2188	2.2	0.95	1275.7	25.0	1358.2	17.1	1490.4	13.7	1490.4	13.7	85.6
67	173961	0.9	10.7372	0.6	3.1827	3.2	0.2478	3.2	0.98	1427.4	40.7	1453.0	25.0	1490.6	11.4	1490.6	11.4	95.8
73	344897	1.0	10.7332	0.9	3.2557	3.1	0.2534	3.0	0.96	1456.2	39.0	1470.5	24.2	1491.3	16.9	1491.3	16.9	97.6
248	55284	3.7	10.7284	0.6	3.1035	2.4	0.2415	2.3	0.97	1394.4	29.3	1433.5	18.5	1492.2	11.6	1492.2	11.6	93.4
185	23474	2.1	10.7156	0.7	2.9442	3.5	0.2288	3.4	0.98	1328.3	41.0	1393.3	26.3	1494.4	12.5	1494.4	12.5	88.9
57	55774	1.0	10.7104	0.7	3.2655	2.4	0.2537	2.3	0.95	1457.3	29.8	1472.9	18.7	1495.3	14.2	1495.3	14.2	97.5
55	66037	1.4	10.6855	0.9	3.2328	3.1	0.2505	3.0	0.96	1441.3	38.5	1465.1	24.1	1499.7	16.6	1499.7	16.6	96.1
103	294473	1.1	10.6510	0.9	3.3367	3.8	0.2578	3.7	0.97	1478.3	48.3	1489.7	29.3	1505.8	16.1	1505.8	16.1	98.2
47	966811	1.1	10.6277	0.8	3.2732	3.6	0.2523	3.5	0.98	1450.3	45.4	1474.7	27.8	1510.0	14.5	1510.0	14.5	96.0
54	22875	2.1	10.5966	1.0	3.5258	2.7	0.2710	2.5	0.94	1545.7	34.8	1533.0	21.4	1515.5	18.0	1515.5	18.0	102.0
301	20027	1.3	10.5862	0.7	2.9979	2.3	0.2302	2.2	0.95	1335.4	26.5	1407.1	17.5	1517.4	13.0	1517.4	13.0	88.0
234	82284	1.7	10.4780	0.7	3.4547	2.3	0.2625	2.1	0.95	1502.8	28.7	1516.9	17.9	1536.7	14.0	1536.7	14.0	97.8
85	78983	1.6	10.4529	0.8	3.4942	3.1	0.2649	2.9	0.97	1514.9	39.8	1525.9	24.1	1541.2	15.0	1541.2	15.0	98.3
54	137851	1.8	10.4416	0.8	3.5427	3.2	0.2683	3.1	0.97	1532.1	42.7	1536.8	25.6	1543.3	15.1	1543.3	15.1	99.3
35	38395	1.0	10.4398	1.0	3.5574	3.2	0.2694	3.0	0.95	1537.5	41.0	1540.1	25.0	1543.6	18.3	1543.6	18.3	99.6
91	58322	2.0	10.4294	0.8	3.4671	3.5	0.2623	3.4	0.97	1501.4	45.7	1519.8	27.7	1545.5	15.9	1545.5	15.9	97.1
14	10932	2.6	10.4157	1.2	3.5554	4.5	0.2686	4.4	0.96	1533.6	59.5	1539.6	36.0	1547.9	23.5	1547.9	23.5	99.1
53	263169	0.9	10.4148	0.9	3.6001	3.7	0.2719	3.6	0.97	1550.6	50.2	1549.6	29.8	1548.1	16.3	1548.1	16.3	100.2
82	47497	0.9	10.3966	0.8	3.6699	2.6	0.2767	2.5	0.96	1574.8	35.2	1564.9	21.0	1551.4	14.1	1551.4	14.1	101.5
77	64420	1.6	10.3959	0.8	3.6829	3.8	0.2777	3.7	0.97	1579.7	51.5	1567.7	30.1	1551.5	15.8	1551.5	15.8	101.8
68	55609	2.3	10.3930	0.9	3.4731	3.6	0.2618	3.5	0.97	1499.0	46.9	1521.1	28.5	1552.0	16.0	1552.0	16.0	96.6
77	298506	2.1	10.3851	0.8	3.6145	2.9	0.2722	2.8	0.96	1552.2	38.8	1552.7	23.3	1553.5	14.7	1553.5	14.7	99.9
300	9639	2.2	10.3826	0.8	2.8486	4.1	0.2145	4.0	0.98	1252.8	45.9	1368.4	30.9	1553.9	15.6	1553.9	15.6	80.6
118	104994	1.9	10.3812	0.8	3.5313	2.7	0.2659	2.5	0.96	1519.8	34.3	1534.2	21.0	1554.2	14.5	1554.2	14.5	97.8
26	28535	1.4	10.3732	0.9	3.4267	4.0	0.2578	3.9	0.97	1478.6	51.8	1510.5	31.7	1555.6	17.7	1555.6	17.7	95.0
95	144561	2.1	10.3658	0.8	3.5463	2.7	0.2666	2.5	0.96	1523.6	34.6	1537.6	21.1	1557.0	14.4	1557.0	14.4	97.9
102	62409	2.3	10.3628	0.8	3.5760	2.9	0.2688	2.8	0.96	1534.5	37.9	1544.2	22.8	1557.5	14.5	1557.5	14.5	98.5
88	43091	1.6	10.3492	0.7	3.6324	3.5	0.2726	3.4	0.98	1554.2	47.4	1556.7	27.9	1559.9	13.7	1559.9	13.7	99.6
198	164702	1.7	10.3487	0.8	3.4419	2.5	0.2583	2.4	0.94	1481.3	31.8	1514.0	20.0	1560.0	15.8	1560.0	15.8	95.0
78	357130	1.8	10.3484	0.8	3.5481	2.3	0.2663	2.1	0.93	1522.0	28.9	1538.0	18.1	1560.1	15.2	1560.1	15.2	97.6
102	89289	2.0	10.3483	0.8	3.1562	3.5	0.2369	3.4	0.97	1370.5	41.6	1446.5	26.6	1560.1	14.5	1560.1	14.5	87.8
240	62501	2.7	10.3297	0.7	3.4436	2.2	0.2580	2.1	0.95	1479.5	27.5	1514.4	17.3	1563.5	13.4	1563.5	13.4	94.6
74	45585	2.3	10.3231	0.8	3.6624	3.3	0.2742	3.2	0.97	1562.1	44.7	1563.2	26.5	1564.7	15.3	1564.7	15.3	99.8
113	4008129	1.6	10.3051	0.8	3.4676	2.9	0.2592	2.8	0.97	1485.6	37.6	1519.9	23.1	1568.0	14.1	1568.0	14.1	94.7
195	210140	6.3	10.2966	0.7	3.7101	2.9	0.2771	2.8	0.97	1576.5	39.4	1573.5	23.2	1569.5	13.1	1569.5	13.1	100.4
70	40577	1.5	10.2863	0.7	3.7718	3.0	0.2814	2.9	0.97	1598.4	41.7	1586.8	24.3	1571.4	13.1	1571.4	13.1	101.7

42	86420	2.0	10.2810	0.8	3.9088	3.4	0.2915	3.3	0.97	1648.8	47.7	1615.5	27.3	1572.3	15.2	1572.3	15.2	104.9
45	20406	0.4	10.2763	0.8	3.6177	2.9	0.2696	2.8	0.96	1538.9	37.8	1553.4	22.9	1573.2	15.2	1573.2	15.2	97.8
99	320315	1.2	10.2646	0.9	3.5583	2.6	0.2649	2.4	0.94	1514.9	32.6	1540.3	20.3	1575.3	16.1	1575.3	16.1	96.2
75	62226	2.8	10.2364	0.9	3.7388	2.7	0.2776	2.6	0.95	1579.1	36.4	1579.7	21.9	1580.5	16.1	1580.5	16.1	99.9
64	29517	1.5	10.2163	0.7	3.7152	3.0	0.2753	2.9	0.98	1567.5	40.7	1574.6	24.0	1584.2	12.2	1584.2	12.2	99.0
139	99458	1.8	10.2138	0.7	3.8843	2.5	0.2877	2.4	0.96	1630.2	33.9	1610.4	19.8	1584.6	12.8	1584.6	12.8	102.9
92	364160	2.5	10.2121	0.9	3.6986	2.6	0.2739	2.4	0.94	1560.8	33.9	1571.1	20.8	1584.9	16.5	1584.9	16.5	98.5
43	29991	1.6	10.2094	0.9	3.8860	2.8	0.2877	2.6	0.95	1630.2	37.8	1610.8	22.4	1585.4	16.6	1585.4	16.6	102.8
98	339617	1.9	10.2080	0.7	3.7187	2.4	0.2753	2.3	0.95	1567.7	31.4	1575.4	19.0	1585.7	13.8	1585.7	13.8	98.9
44	163756	1.0	10.2002	0.9	3.8585	3.1	0.2854	2.9	0.95	1618.7	41.6	1605.0	24.6	1587.1	17.3	1587.1	17.3	102.0
180	235371	10.8	10.1940	1.0	3.7152	2.6	0.2747	2.4	0.92	1564.5	33.3	1574.7	20.8	1588.2	19.0	1588.2	19.0	98.5
218	215108	27.3	10.1931	0.6	3.7822	2.4	0.2796	2.4	0.97	1589.4	33.2	1589.0	19.5	1588.4	11.1	1588.4	11.1	100.1
81	463577	1.8	10.1871	0.9	3.7385	3.5	0.2762	3.4	0.97	1572.3	47.9	1579.6	28.4	1589.5	16.4	1589.5	16.4	98.9
32	12698	0.9	10.1817	1.0	3.7737	4.1	0.2787	4.0	0.97	1584.7	56.0	1587.2	33.0	1590.5	18.3	1590.5	18.3	99.6
70	45045	1.3	10.1669	0.7	3.7868	3.0	0.2792	2.9	0.97	1587.5	41.0	1590.0	24.1	1593.2	13.3	1593.2	13.3	99.6
143	177689	3.7	10.1666	0.7	3.7606	2.6	0.2773	2.5	0.97	1577.7	35.6	1584.4	21.1	1593.3	12.8	1593.3	12.8	99.0
38	62722	1.7	10.1611	0.9	3.9373	3.2	0.2902	3.1	0.96	1642.3	44.2	1621.4	25.7	1594.3	16.0	1594.3	16.0	103.0
115	63601	2.0	10.1428	0.6	3.8086	2.6	0.2802	2.5	0.97	1592.2	35.2	1594.6	20.7	1597.6	12.1	1597.6	12.1	99.7
78	136532	2.7	10.1418	0.7	3.8533	2.6	0.2834	2.5	0.96	1608.6	36.2	1604.0	21.3	1597.8	13.4	1597.8	13.4	100.7
45	13420	1.2	10.1385	0.9	3.7544	2.5	0.2761	2.4	0.94	1571.5	33.0	1583.1	20.3	1598.4	16.5	1598.4	16.5	98.3
41	73187	1.5	10.1365	0.7	3.8153	5.3	0.2805	5.3	0.99	1593.8	74.6	1596.0	42.9	1598.8	12.8	1598.8	12.8	99.7
106	67953	1.9	10.1360	0.9	3.8390	2.9	0.2822	2.8	0.95	1602.5	39.1	1601.0	23.4	1598.9	17.4	1598.9	17.4	100.2
178	112865	6.8	10.1339	0.9	3.7354	3.0	0.2745	2.9	0.96	1563.8	40.3	1579.0	24.3	1599.3	16.4	1599.3	16.4	97.8
18	6939	1.1	10.1334	1.2	3.9229	4.3	0.2883	4.1	0.96	1633.1	59.5	1618.4	34.8	1599.4	22.4	1599.4	22.4	102.1
87	39389	5.3	10.1331	0.8	3.8337	4.8	0.2817	4.8	0.99	1600.2	67.3	1599.8	38.8	1599.4	14.7	1599.4	14.7	100.0
246	62762	2.8	10.1294	0.5	3.5170	2.0	0.2584	1.9	0.96	1481.5	25.1	1531.1	15.6	1600.1	9.8	1600.1	9.8	92.6
98	94197	2.2	10.1252	0.7	3.8413	2.6	0.2821	2.5	0.97	1601.9	35.8	1601.4	21.0	1600.9	12.8	1600.9	12.8	100.1
131	919230	1.2	10.1056	0.8	3.6814	3.2	0.2698	3.1	0.96	1539.9	41.9	1567.3	25.3	1604.5	15.5	1604.5	15.5	96.0
158	36302	1.4	10.1052	0.7	3.5285	2.4	0.2586	2.3	0.95	1482.7	30.0	1533.6	18.8	1604.6	13.3	1604.6	13.3	92.4
188	28536	2.0	10.1022	0.7	3.0785	2.1	0.2256	2.0	0.94	1311.2	23.8	1427.4	16.3	1605.1	13.3	1605.1	13.3	81.7
222	201495	7.2	10.1016	0.8	3.7384	2.4	0.2739	2.2	0.94	1560.5	30.7	1579.6	18.9	1605.2	15.1	1605.2	15.1	97.2
81	128921	1.5	10.1012	0.7	3.8056	2.5	0.2788	2.4	0.96	1585.3	34.3	1593.9	20.4	1605.3	12.8	1605.3	12.8	98.8
41	66123	1.2	10.0995	0.9	3.8841	3.9	0.2845	3.8	0.97	1614.0	54.7	1610.4	31.9	1605.6	17.5	1605.6	17.5	100.5
97	42209	1.9	10.0986	0.9	3.9177	3.0	0.2869	2.9	0.96	1626.2	41.6	1617.3	24.5	1605.8	16.7	1605.8	16.7	101.3
39	31241	1.8	10.0871	0.9	3.8594	3.1	0.2823	2.9	0.95	1603.2	41.4	1605.2	24.7	1607.9	17.7	1607.9	17.7	99.7
184	280925	2.1	10.0848	0.8	3.8752	2.7	0.2834	2.6	0.96	1608.7	37.0	1608.5	21.9	1608.3	14.5	1608.3	14.5	100.0
50	76351	1.6	10.0841	0.7	3.8603	2.4	0.2823	2.3	0.95	1603.1	32.4	1605.4	19.4	1608.5	13.9	1608.5	13.9	99.7
148	381022	1.3	10.0830	0.7	3.8382	2.2	0.2807	2.1	0.94	1594.8	29.6	1600.8	17.9	1608.7	13.9	1608.7	13.9	99.1
241	42652	1.9	10.0800	0.6	3.6091	2.4	0.2638	2.3	0.97	1509.5	30.8	1551.5	18.8	1609.2	10.9	1609.2	10.9	93.8
74	62092	1.0	10.0714	0.6	3.8471	2.6	0.2810	2.6	0.97	1596.4	36.1	1602.7	21.1	1610.8	11.1	1610.8	11.1	99.1
303	15244	2.0	10.0694	0.7	3.2270	2.9	0.2357	2.9	0.97	1364.1	35.1	1463.7	22.8	1611.2	13.3	1611.2	13.3	84.7
87	98702	1.5	10.0651	0.7	3.8195	2.7	0.2788	2.6	0.96	1585.4	37.1	1596.9	22.1	1612.0	13.7	1612.0	13.7	98.3
317	17333	1.4	10.0537	0.7	3.2569	2.8	0.2375	2.8	0.97	1373.6	34.1	1470.8	22.0	1614.1	12.2	1614.1	12.2	85.1
36	36137	1.9	10.0517	0.9	3.8259	3.9	0.2789	3.8	0.97	1585.9	53.7	1598.2	31.7	1614.5	17.1	1614.5	17.1	98.2
55	1519305	1.6	10.0482	0.9	3.8969	2.9	0.2840	2.8	0.95	1611.4	39.5	1613.0	23.5	1615.1	16.2	1615.1	16.2	99.8
84	87590	0.9	10.0440	0.7	3.7966	2.4	0.2766	2.3	0.95	1574.1	32.0	1592.0	19.3	1615.9	13.7	1615.9	13.7	97.4
159	129967	2.2	10.0386	0.6	3.8057	2.5	0.2771	2.4	0.97	1576.6	33.4	1593.9	19.8	1616.9	10.8	1616.9	10.8	97.5
97	176817	0.8	10.0380	0.7	3.8007	3.0	0.2767	2.9	0.97	1574.7	40.8	1592.9	24.2	1617.0	13.4	1617.0	13.4	97.4
348	17573	9.7	10.0379	0.7	3.5056	4.0	0.2552	3.9	0.99	1465.3	51.5	1528.5	31.5	1617.0	12.7	1617.0	12.7	90.6
51	24421	1.5	10.0367	1.1	3.7954	3.1	0.2763	2.9	0.94	1572.6	41.0	1591.8	25.2	1617.2	20.3	1617.2	20.3	97.2
36	1095359	1.0	10.0361	0.8	3.8843	2.5	0.2827	2.4	0.95	1605.1	33.7	1610.4	20.2	1617.4	15.1	1617.4	15.1	99.2
57	104743	1.3	10.0310	0.8	3.9122	2.6	0.2846	2.4	0.95	1614.6	34.7	1616.2	20.7	1618.3	15.0	1618.3	15.0	99.8
185	30691	2.2	10.0299	0.8	3.4457	2.8	0.2507	2.6	0.96	1441.8	34.1	1514.9	21.8	1618.5	15.2	1618.5	15.2	89.1
210	105356	2.5	10.0276	0.8	3.8095	2.3	0.2771	2.2	0.94	1576.5	30.3	1594.8	18.5	1618.9	14.8	1618.9	14.8	97.4
82	687910	2.0	10.0252	0.8	3.8383	3.3	0.2791	3.2	0.97	1586.7	45.1	1600.8	26.6	1619.4	14.7	1619.4	14.7	98.0
100	62478	1.7	10.0242	0.8	3.9906	3.3	0.2901	3.2	0.97	1642.2	47.1	1632.3	27.1	1619.6	14.6	1619.6	14.6	101.4
25	105537	0.8	10.0227	1.2	4.0505	4.6	0.2944	4.4	0.96	1663.7	65.0	1644.4	37.4	1619.9	22.7	1619.9	22.7	102.7
82	64241	1.0	10.0213	0.7	4.0068	2.7	0.2912	2.6	0.96	1647.6	37.8	1635.6	21.9	1620.1	13.3	1620.1	13.3	101.7
64	280631	1.5	10.0203	0.8	3.9049	3.3	0.2838	3.2	0.97	1610.4	46.3	1614.7	27.0	1620.3	14.6	1620.3	14.6	99.4
69	144368	1.2	10.0202	0.8	3.8474	2.3	0.2796	2.2	0.94	1589.4	30.9	1602.7	18.9	1620.3	15.3	1620.3	15.3	98.1
55	732215	1.6	10.0171	0.7	4.0057	3.6	0.2910	3.6	0.98	1646.6	51.9	1635.3	29.5	1620.9	12.8	1620.9	12.8	101.6
51	61395	1.7	10.0081	0.9	3.7219	3.1	0.2702	3.0	0.96	1541.6	40.9	1576.1	24.9	1622.5	16.5	1622.5	16.5	95.0
70	1541882	1.4	10.0057	0.9	3.8982	3.1	0.2829	3.0	0.96	1605.9	42.9	1613.3	25.3	1623.0	15.9	1623.0	15.9	98.9
60	84866	1.1	10.0012	0.8	3.8934	3.0	0.2824	2.9	0.96	1603.5	41.0	1612.3	24.3	1623.8	15.2	1623.8	15.2	98.7
53	150625	1.0	10.0010	0.8	3.9871	3.3	0.2892	3.2	0.97	1637.5	46.0	1631.6	26.6	1623.9	14.5	1623.9	14.5	100.8
171	74821	2.5	9.9994	0.7	3.9733	3.1	0.2881	3.0	0.98	1632.3	43.7	1628.8	25.2	1624.2	12.7	1624.2	12.7	100.5
131	94837	1.6	9.9986	0.8	3.8140	2.5	0.2766	2.4	0.95	1574.1	33.4	1595.7	20.3	1624.3	14.8	1624.3	14.8	96.9
78	206156	2.9	9.9905	0.9	3.5898	2.3	0.2601	2.1	0.92	1490.4	28.3	1547.3	18.3	1625.8	16.4	1625.8	16.4	91.7
75	65264	2.2	9.9900	0.8	3.8695	3.2	0.2804	3.1	0.96	1593.2	43.4	1607.3	25.7	1625.9	15.5	1625.9	15.5	98.0
160	29699	3.4	9.9844	0.7	3.5472	3.2	0.2569	3.1	0.98	1473.8	40.9	1537.8	25.1	1627.0	12.3	1627.0	12.3	90.6
150	30428	1.0	9.9828	0.7	3.5721	3.1	0.2586	3.0	0.97	1482.8	39.8	1543.3	24.5	1627.3	12.9	1627.3	12.9	91.1

81	145419	1.5	9.9811	0.8	3.9818	2.8	0.2882	2.7	0.96	1632.7	39.0	1630.5	22.8	1627.6	14.3	1627.6	14.3	100.3
38	35554	0.9	9.9783	1.0	3.8342	3.2	0.2775	3.0	0.95	1578.7	42.7	1600.0	25.8	1628.1	18.0	1628.1	18.0	97.0
137	77424	1.0	9.9731	0.8	3.8095	2.7	0.2755	2.6	0.95	1568.9	36.2	1594.7	22.0	1629.1	15.7	1629.1	15.7	96.3
47	110310	1.1	9.9730	0.8	3.9600	2.5	0.2864	2.3	0.94	1623.7	33.1	1626.0	19.9	1629.1	15.7	1629.1	15.7	99.7
80	423127	1.7	9.9722	0.7	3.9726	3.6	0.2873	3.5	0.98	1628.1	51.0	1628.6	29.4	1629.3	13.4	1629.3	13.4	99.9
149	27261	1.7	9.9681	0.8	3.7860	2.7	0.2737	2.5	0.96	1559.6	35.2	1589.8	21.3	1630.0	14.2	1630.0	14.2	95.7
94	27492	1.7	9.9620	1.1	3.7595	2.9	0.2716	2.7	0.92	1549.1	36.5	1584.1	23.1	1631.1	20.7	1631.1	20.7	95.0
108	261493	1.7	9.9591	0.9	3.9440	2.4	0.2849	2.3	0.94	1615.9	32.3	1622.8	19.6	1631.7	15.9	1631.7	15.9	99.0
54	636795	0.7	9.9538	0.8	3.8729	2.6	0.2796	2.5	0.96	1589.3	35.5	1608.0	21.3	1632.7	14.2	1632.7	14.2	97.3
159	248403	1.9	9.9533	0.8	3.9568	2.7	0.2856	2.6	0.96	1619.7	36.5	1625.4	21.6	1632.8	14.6	1632.8	14.6	99.2
181	268615	2.2	9.9495	0.8	3.8402	2.3	0.2771	2.2	0.95	1576.8	30.7	1601.2	18.7	1633.5	14.0	1633.5	14.0	96.5
35	57731	1.6	9.9489	1.0	3.9054	3.3	0.2818	3.1	0.95	1600.4	43.9	1614.8	26.4	1633.6	19.0	1633.6	19.0	98.0
93	289699	2.3	9.9379	0.9	4.0094	2.9	0.2890	2.7	0.95	1636.5	39.5	1636.1	23.3	1635.6	15.8	1635.6	15.8	100.0
95	85519	1.7	9.9333	0.8	3.9172	3.1	0.2822	3.0	0.97	1602.5	42.4	1617.2	25.0	1636.5	14.3	1636.5	14.3	97.9
88	1390318	1.9	9.9108	0.7	4.0215	3.1	0.2891	3.0	0.97	1636.9	43.0	1638.6	24.9	1640.7	13.6	1640.7	13.6	99.8
53	42229	1.2	9.8990	0.8	3.8358	3.2	0.2754	3.1	0.97	1568.1	42.7	1600.3	25.5	1642.9	14.3	1642.9	14.3	95.4
38	919147	1.8	9.8914	0.8	4.0269	3.6	0.2889	3.5	0.97	1636.0	50.1	1639.6	29.0	1644.3	15.3	1644.3	15.3	99.5
133	14811	0.4	9.8746	0.7	3.7211	2.7	0.2665	2.6	0.97	1523.0	35.9	1575.9	21.9	1647.5	12.6	1647.5	12.6	92.4
99	34323	1.8	9.8684	0.7	4.0105	2.7	0.2870	2.6	0.96	1626.7	37.4	1636.3	22.0	1648.7	13.8	1648.7	13.8	98.7
116	29934	1.0	9.8606	0.9	3.9042	2.7	0.2792	2.6	0.95	1587.4	36.4	1614.6	22.1	1650.1	16.6	1650.1	16.6	96.2
155	620868	3.1	9.8527	0.6	4.0583	2.5	0.2900	2.4	0.97	1641.5	35.4	1646.0	20.5	1651.6	10.8	1651.6	10.8	99.4
104	349822	4.0	9.8472	0.8	4.0288	2.3	0.2877	2.1	0.93	1630.2	30.6	1640.0	18.5	1652.7	15.0	1652.7	15.0	98.6
99	42331	1.3	9.8334	0.9	3.9262	3.0	0.2800	2.9	0.96	1591.4	40.7	1619.1	24.4	1655.3	15.9	1655.3	15.9	96.1
85	52429	1.0	9.7631	0.9	3.9854	2.6	0.2822	2.5	0.94	1602.4	35.4	1631.2	21.4	1668.5	16.1	1668.5	16.1	96.0
161	36093	1.1	9.6867	0.8	3.8831	2.6	0.2728	2.5	0.96	1555.0	34.4	1610.2	21.0	1683.1	14.1	1683.1	14.1	92.4
41	53772	2.7	9.6734	0.7	4.2683	3.4	0.2995	3.3	0.98	1688.6	49.6	1687.3	28.1	1685.6	13.3	1685.6	13.3	100.2
117	384317	2.6	9.6402	0.8	4.2520	2.9	0.2973	2.8	0.96	1677.8	40.7	1684.1	23.7	1691.9	15.5	1691.9	15.5	99.2
75	479778	2.6	9.6361	0.9	4.2909	2.4	0.2999	2.2	0.93	1690.7	32.9	1691.6	19.5	1692.7	15.7	1692.7	15.7	99.9
187	13289	2.2	9.6259	1.0	3.9428	2.9	0.2753	2.8	0.93	1567.5	38.3	1622.5	23.9	1694.7	19.3	1694.7	19.3	92.5
167	683705	2.7	9.6180	0.6	4.3850	2.3	0.3059	2.2	0.97	1720.4	33.6	1709.5	19.0	1696.2	10.8	1696.2	10.8	101.4
75	107123	2.1	9.6118	1.1	4.4027	3.3	0.3069	3.2	0.95	1725.5	48.0	1712.9	27.7	1697.4	19.5	1697.4	19.5	101.7
139	142961	1.7	9.6095	0.9	4.2168	2.9	0.2939	2.7	0.95	1660.9	40.2	1677.3	23.7	1697.8	16.5	1697.8	16.5	97.8
73	787598	2.1	9.5979	0.8	4.4053	2.9	0.3067	2.8	0.97	1724.2	42.3	1713.3	24.0	1700.0	13.8	1700.0	13.8	101.4
95	100313	1.6	9.5955	0.8	4.4815	2.6	0.3119	2.5	0.96	1750.0	38.2	1727.6	21.6	1700.5	14.1	1700.5	14.1	102.9
99	98310	1.5	9.5876	0.8	4.1650	2.4	0.2896	2.2	0.94	1639.6	32.3	1667.2	19.4	1702.0	14.4	1702.0	14.4	96.3
77	427118	2.8	9.5867	0.6	4.2784	3.4	0.2975	3.3	0.98	1678.8	49.4	1689.2	28.0	1702.2	12.0	1702.2	12.0	98.6
142	145007	2.0	9.5767	0.6	4.3039	2.4	0.2989	2.3	0.97	1686.0	34.7	1694.1	20.0	1704.1	11.5	1704.1	11.5	98.9
179	170309	2.2	9.5685	1.0	4.3836	2.4	0.3042	2.2	0.91	1712.2	32.9	1709.3	19.8	1705.7	17.9	1705.7	17.9	100.4
186	579180	2.3	9.5665	0.7	4.3606	2.8	0.3025	2.7	0.97	1703.9	39.9	1704.9	22.8	1706.1	13.1	1706.1	13.1	99.9
94	61525	2.7	9.5354	0.8	4.3381	2.6	0.3000	2.5	0.95	1691.4	36.9	1700.6	21.6	1712.1	15.4	1712.1	15.4	98.8
90	329732	3.4	9.5206	0.6	4.4838	2.7	0.3096	2.6	0.97	1738.8	39.2	1728.0	22.0	1714.9	11.8	1714.9	11.8	101.4
193	45191	4.1	9.5184	0.8	4.0700	3.0	0.2810	2.8	0.96	1596.2	40.3	1648.3	24.2	1715.3	15.0	1715.3	15.0	93.1
242	177167	3.0	9.5160	0.7	4.3475	2.3	0.3000	2.2	0.95	1691.5	32.5	1702.4	19.1	1715.8	13.7	1715.8	13.7	98.6
132	386099	1.6	9.5087	0.7	4.4238	2.5	0.3051	2.4	0.96	1716.4	35.9	1716.8	20.7	1717.2	13.6	1717.2	13.6	100.0
88	2278288	3.3	9.4939	0.7	4.3661	2.9	0.3006	2.9	0.98	1694.4	42.8	1705.9	24.4	1720.1	12.0	1720.1	12.0	98.5
214	78770	2.3	9.4930	0.7	4.3231	2.6	0.2976	2.5	0.96	1679.6	37.1	1697.8	21.5	1720.3	13.2	1720.3	13.2	97.6
86	3107502	2.5	9.4876	0.7	4.3930	2.9	0.3023	2.8	0.97	1702.6	42.3	1711.0	24.0	1721.3	12.4	1721.3	12.4	98.9
218	155501	3.1	9.4494	0.7	4.2277	2.8	0.2897	2.7	0.97	1640.2	39.0	1679.4	22.9	1728.7	13.4	1728.7	13.4	94.9
66	50830	1.5	9.4477	0.8	4.4415	2.6	0.3043	2.4	0.95	1712.8	36.4	1720.1	21.2	1729.0	14.7	1729.0	14.7	99.1
147	84087	1.5	9.4358	0.7	4.4737	2.9	0.3062	2.8	0.97	1721.8	42.9	1726.1	24.2	1731.4	12.5	1731.4	12.5	99.4
121	100096	4.6	9.4348	0.9	4.5827	2.5	0.3136	2.4	0.94	1758.3	36.5	1746.1	21.0	1731.5	15.7	1731.5	15.7	101.5
134	202108	2.7	9.4237	0.8	4.2548	3.3	0.2908	3.2	0.97	1645.5	46.5	1684.7	27.2	1733.7	15.2	1733.7	15.2	94.9
109	299676	2.8	9.4158	0.8	4.5266	2.6	0.3091	2.5	0.96	1736.4	38.2	1735.9	21.8	1735.2	14.1	1735.2	14.1	100.1
69	11739	0.7	9.3990	1.1	3.9897	3.4	0.2720	3.2	0.94	1550.8	43.8	1632.1	27.4	1738.5	20.7	1738.5	20.7	89.2
100	53509	2.4	9.3960	0.8	4.4915	2.8	0.3061	2.7	0.96	1721.4	40.2	1729.4	23.1	1739.1	14.7	1739.1	14.7	99.0
135	1098117	2.7	9.3939	0.8	4.4585	2.5	0.3038	2.4	0.95	1709.9	36.3	1723.3	21.1	1739.5	14.6	1739.5	14.6	98.3
48	31754	2.7	9.3763	0.8	4.5371	3.5	0.3085	3.5	0.98	1733.5	52.5	1737.8	29.5	1742.9	14.2	1742.9	14.2	99.5
188	127261	2.4	9.3712	0.7	4.3858	2.4	0.2981	2.3	0.95	1681.8	33.4	1709.7	19.5	1743.9	12.8	1743.9	12.8	96.4
161	507082	4.9	9.3638	0.6	4.5242	2.5	0.3072	2.5	0.97	1727.1	37.2	1735.4	21.0	1745.4	11.0	1745.4	11.0	99.0
250	43167	2.4	9.3601	0.6	3.8177	3.3	0.2592	3.3	0.98	1485.6	43.3	1596.5	26.7	1746.1	10.8	1746.1	10.8	85.1
201	143407	4.3	9.3599	0.7	4.2003	4.0	0.2851	3.9	0.98	1617.1	55.8	1674.1	32.6	1746.2	13.4	1746.2	13.4	92.6
135	5691	1.4	9.3536	1.0	3.6960	2.4	0.2507	2.2	0.92	1442.3	28.2	1570.5	19.1	1747.4	17.6	1747.4	17.6	82.5
85	75904	2.3	9.3487	0.7	4.4843	2.3	0.3041	2.2	0.95	1711.4	32.5	1728.1	18.9	1748.3	13.0	1748.3	13.0	97.9
84	519458	2.7	9.3272	0.8	4.4523	3.1	0.3012	3.0	0.97	1697.2	45.3	1722.1	26.0	1752.6	14.4	1752.6	14.4	96.8
215	69464	3.6	9.3163	0.7	4.5375	2.6	0.3066	2.5	0.96	1723.9	38.2	1737.9	21.8	1754.7	13.1	1754.7	13.1	98.2
77	2553403	2.2	9.3087	0.8	4.7151	3.6	0.3183	3.5	0.97	1781.6	54.4	1769.9	30.1	1756.2	15.3	1756.2	15.3	101.4
97	662287	6.8	9.3087	0.8	4.4712	3.0	0.3019	2.9	0.96	1700.6	42.6	1725.6	24.5	1756.2	14.2	1756.2	14.2	96.8
84	49105	3.7	9.3071	0.6	4.8774	3.0	0.3292	2.9	0.98	1834.7	46.7	1798.4	25.2	1756.5	11.6	1756.5	11.6	104.4
163	157946	2.4	9.2977	0.9	4.6160	3.0	0.3113	2.9	0.96	1747.0	44.5	1752.2	25.3	1758.4	16.2	1758.4	16.2	99.4
83	27492	3.4	9.2847	0.9	4.5638	3.0	0.3073	2.9	0.95	1727.5	43.9	1742.7	25.3	1760.9	16.9	1760.9	16.9	98.1
73	3911	2.1	9.2785	2.6	4.2821	4.0	0.2882	3.0	0.76	1632.3	43.4	1689.9	32.5	1762.1	46.9	1762.1	46.9	92.6

140	80068	2.5	9.2713	0.7	4.5703	2.9	0.3073	2.8	0.97	1727.5	42.4	1743.9	24.0	1763.5	12.5	1763.5	12.5	98.0
341	73502	10.6	9.2474	0.7	4.6013	2.1	0.3086	2.0	0.94	1733.8	30.6	1749.5	17.8	1768.3	12.9	1768.3	12.9	98.1
67	87777	5.0	9.2450	0.8	4.5929	3.5	0.3080	3.4	0.97	1730.7	51.5	1748.0	29.1	1768.7	14.6	1768.7	14.6	97.8
373	31455	3.8	9.2325	0.8	3.8946	3.0	0.2608	2.9	0.97	1493.9	38.7	1612.6	24.2	1771.2	13.7	1771.2	13.7	84.3
203	145291	5.4	9.2298	0.7	4.8010	2.7	0.3214	2.6	0.97	1796.5	40.9	1785.1	22.7	1771.8	12.3	1771.8	12.3	101.4
129	66763	2.8	9.2207	0.7	4.7137	3.5	0.3152	3.4	0.98	1766.4	53.3	1769.7	29.6	1773.6	13.5	1773.6	13.5	99.6
91	1177347	2.0	9.2187	0.7	4.6437	3.5	0.3105	3.4	0.98	1743.1	52.4	1757.2	29.3	1773.9	12.9	1773.9	12.9	98.3
83	83515	2.1	9.2180	0.7	4.5866	3.2	0.3066	3.1	0.97	1724.1	47.4	1746.8	26.8	1774.1	13.7	1774.1	13.7	97.2
116	197761	4.8	9.2166	0.7	4.7531	2.8	0.3177	2.7	0.97	1778.6	42.7	1776.6	23.8	1774.4	13.4	1774.4	13.4	100.2
127	682909	4.5	9.2106	0.7	4.7618	2.7	0.3181	2.6	0.97	1780.4	40.2	1778.2	22.4	1775.6	12.4	1775.6	12.4	100.3
57	619057	3.9	9.2091	0.8	4.5536	4.1	0.3041	4.0	0.98	1711.8	60.1	1740.8	33.9	1775.9	14.4	1775.9	14.4	96.4
105	41529	1.9	9.2044	0.9	4.6068	3.7	0.3075	3.6	0.97	1728.6	54.2	1750.5	30.7	1776.8	15.8	1776.8	15.8	97.3
209	107470	5.1	9.1959	0.6	4.4752	2.4	0.2985	2.3	0.96	1683.7	33.6	1726.4	19.6	1778.5	11.7	1778.5	11.7	94.7
103	966991	1.1	9.1937	0.8	4.8404	2.6	0.3227	2.5	0.95	1803.1	39.7	1791.9	22.3	1778.9	14.5	1778.9	14.5	101.4
95	161608	2.3	9.1923	0.6	4.7060	3.4	0.3137	3.4	0.98	1759.1	52.0	1768.3	28.8	1779.2	11.2	1779.2	11.2	98.9
214	73382	5.8	9.1863	0.6	4.7647	2.2	0.3174	2.2	0.96	1777.3	33.4	1778.7	18.7	1780.4	10.8	1780.4	10.8	99.8
131	180796	2.7	9.1666	0.7	4.7226	2.9	0.3140	2.8	0.97	1760.2	42.9	1771.3	24.0	1784.3	12.7	1784.3	12.7	98.7
271	33518	4.4	9.1637	0.8	4.2784	2.7	0.2844	2.5	0.95	1613.2	36.3	1689.2	22.0	1784.9	14.7	1784.9	14.7	90.4
154	114520	3.7	9.1524	0.7	4.8001	2.4	0.3186	2.3	0.96	1783.0	35.4	1784.9	19.9	1787.1	12.1	1787.1	12.1	99.8
303	163536	12.9	9.1499	0.7	4.3659	2.0	0.2897	1.9	0.94	1640.2	27.4	1705.9	16.6	1787.6	12.2	1787.6	12.2	91.8
180	1274868	5.6	9.1469	0.8	4.8675	2.6	0.3229	2.5	0.95	1803.9	39.2	1796.7	22.1	1788.2	15.1	1788.2	15.1	100.9
172	35788	2.1	9.1428	0.8	4.1148	1.9	0.2728	1.8	0.90	1555.3	24.2	1657.2	15.9	1789.0	15.3	1789.0	15.3	86.9
211	202841	5.7	9.1310	0.7	4.7328	2.6	0.3134	2.6	0.97	1757.5	39.4	1773.1	22.2	1791.4	12.4	1791.4	12.4	98.1
56	40208	2.0	9.1153	0.7	4.8431	2.9	0.3202	2.8	0.97	1790.6	43.2	1792.4	24.1	1794.5	13.5	1794.5	13.5	99.8
146	147788	7.0	9.1008	0.8	4.7795	2.9	0.3155	2.8	0.96	1767.6	43.6	1781.3	24.5	1797.4	13.9	1797.4	13.9	98.3
235	287141	3.9	9.0990	0.7	4.5831	2.6	0.3025	2.5	0.96	1703.5	37.3	1746.2	21.6	1797.8	12.9	1797.8	12.9	94.8
180	267898	9.5	9.0942	0.7	4.7985	2.9	0.3165	2.8	0.97	1772.6	43.4	1784.6	24.4	1798.7	13.5	1798.7	13.5	98.5
106	421689	2.4	9.0905	0.9	4.7303	2.8	0.3119	2.6	0.95	1749.9	40.1	1772.6	23.1	1799.5	15.8	1799.5	15.8	97.2
133	218167	2.0	9.0759	0.8	4.9006	2.5	0.3226	2.4	0.94	1802.3	37.0	1802.4	21.0	1802.4	14.8	1802.4	14.8	100.0
178	247754	8.5	9.0731	0.6	4.6350	2.7	0.3050	2.6	0.97	1716.1	39.0	1755.6	22.3	1803.0	11.8	1803.0	11.8	95.2
144	20546	0.6	9.0591	0.9	3.9520	3.6	0.2597	3.5	0.97	1488.1	46.0	1624.4	28.9	1805.8	15.7	1805.8	15.7	82.4
134	77245	1.5	8.8907	0.6	5.0706	2.4	0.3270	2.3	0.97	1823.6	36.8	1831.2	20.3	1839.8	10.7	1839.8	10.7	99.1
123	1031700	2.3	8.8749	0.6	5.0376	2.4	0.3243	2.3	0.96	1810.5	36.7	1825.7	20.4	1843.0	11.6	1843.0	11.6	98.2
260	25205	7.0	8.8701	2.1	4.5259	4.1	0.2912	3.6	0.86	1647.3	52.0	1735.7	34.5	1844.0	37.8	1844.0	37.8	89.3
188	77661	1.3	8.8086	0.7	4.8103	2.3	0.3073	2.2	0.96	1727.5	34.0	1786.7	19.7	1856.6	12.3	1856.6	12.3	93.0
175	50595	1.5	8.7859	0.6	5.0060	2.3	0.3190	2.2	0.96	1784.8	34.5	1820.3	19.5	1861.2	11.6	1861.2	11.6	95.9
22	118697	1.8	8.7378	0.8	5.3318	4.5	0.3379	4.5	0.98	1876.5	72.7	1874.0	38.8	1871.1	14.5	1871.1	14.5	100.3
107	140123	2.9	8.7348	0.8	5.2664	2.8	0.3336	2.7	0.95	1856.0	43.1	1863.4	23.9	1871.8	15.0	1871.8	15.0	99.2
28	31245	0.9	8.5694	1.0	5.5176	4.0	0.3429	3.9	0.97	1900.7	64.4	1903.3	34.7	1906.2	17.7	1906.2	17.7	99.7
63	165191	2.3	8.4222	0.8	5.6345	3.0	0.3442	2.9	0.97	1906.7	47.4	1921.4	25.7	1937.2	14.0	1937.2	14.0	98.4
78	76541	1.5	8.3599	0.8	5.7272	3.1	0.3473	3.0	0.96	1921.5	49.7	1935.5	26.8	1950.5	14.7	1950.5	14.7	98.5
70	80085	1.8	8.2451	0.8	6.0970	2.8	0.3646	2.7	0.96	2003.9	46.3	1989.8	24.5	1975.2	14.2	1975.2	14.2	101.5
119	260072	7.5	8.0998	2.0	5.8274	6.5	0.3423	6.2	0.95	1897.9	101.8	1950.5	56.6	2006.8	36.3	2006.8	36.3	94.6
123	297946	1.4	7.6521	0.9	6.8495	2.9	0.3801	2.7	0.95	2076.9	48.5	2092.1	25.5	2107.2	15.6	2107.2	15.6	98.6
170	1479750	3.2	6.7825	0.7	8.7632	2.9	0.4311	2.8	0.97	2310.5	53.9	2313.7	26.1	2316.4	11.6	2316.4	11.6	99.7
367	30469	0.8	6.3293	1.1	7.8331	3.5	0.3596	3.3	0.95	1980.2	56.1	2212.0	31.2	2434.3	18.4	2434.3	18.4	81.3
94	182517	3.1	6.2797	0.7	10.3088	2.5	0.4695	2.4	0.96	2481.4	48.7	2462.9	22.8	2447.6	11.5	2447.6	11.5	101.4
101	403778	2.5	6.0977	0.7	10.5695	2.9	0.4674	2.8	0.97	2472.3	56.7	2486.0	26.5	2497.3	12.1	2497.3	12.1	99.0
99	91004	1.6	5.5564	0.8	12.3478	2.8	0.4976	2.7	0.96	2603.5	58.0	2631.2	26.4	2652.6	12.8	2652.6	12.8	98.1
97	120582	1.5	5.5253	0.7	12.7251	2.9	0.5099	2.8	0.97	2656.4	60.4	2659.5	26.9	2661.9	11.5	2661.9	11.5	99.8
48	888727	1.5	5.3924	0.8	13.1266	3.4	0.5134	3.3	0.97	2671.0	71.8	2688.8	31.9	2702.2	13.4	2702.2	13.4	98.8
79	117243	2.5	5.0450	0.7	14.6333	2.8	0.5354	2.7	0.97	2764.3	61.7	2791.7	26.9	2811.6	11.1	2811.6	11.1	98.3
171	1122676	2.9	4.3128	0.6	18.7605	2.4	0.5868	2.3	0.96	2976.5	54.4	3029.6	22.8	3065.0	10.0	3065.0	10.0	97.1
109	181194	1.6	3.8081	0.7	23.6091	2.6	0.6521	2.5	0.97	3236.3	64.1	3252.4	25.4	3262.3	10.6	3262.3	10.6	99.2

Slessor Glacier Till

					Isotope ratios							Apparent ages (Ma)						
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
4507	1811	21.6	11.0526	2.2	0.6775	3.2	0.0543	2.4	0.74	340.9	7.9	525.2	13.2	1435.6	41.7	340.9	7.9	NA
3817	11482	15.1	15.2209	1.0	0.5239	2.6	0.0578	2.4	0.92	362.5	8.4	427.8	9.1	796.8	21.8	362.5	8.4	NA
636	55190	5.4	16.6992	0.9	0.7964	2.6	0.0964	2.5	0.93	593.6	14.0	594.8	11.9	599.4	20.5	593.6	14.0	99.0
158	283716	3.2	14.6782	1.3	1.1100	3.4	0.1182	3.2	0.93	720.0	21.7	758.2	18.3	872.5	26.4	720.0	21.7	82.5
863	958248	10.5	11.1776	0.7	2.7246	2.1	0.2209	2.0	0.95	1286.5	23.7	1335.2	15.9	1414.1	12.6	1414.1	12.6	91.0
2655	406231	52.6	10.5833	0.7	2.9478	2.1	0.2263	2.0	0.94	1314.9	23.4	1394.3	15.9	1517.9	13.9	1517.9	13.9	86.6
1800	217800	14.2	10.4224	0.9	2.8048	2.2	0.2120	2.0	0.92	1239.5	22.7	1356.8	16.4	1546.7	16.3	1546.7	16.3	80.1
2615	239830	22.9	10.2311	0.6	3.5577	2.1	0.2640	2.0	0.95	1510.2	26.9	1540.2	16.6	1581.4	11.8	1581.4	11.8	95.5
2244	1335065	21.8	10.2076	0.7	3.7990	2.3	0.2812	2.2	0.95	1597.6	31.5	1592.5	18.9	1585.8	14.0	1585.8	14.0	100.7
2029	289209	7.5	10.1837	0.8	2.9827	2.5	0.2203	2.4	0.95	1283.5	28.1	1403.2	19.3	1590.1	14.6	1590.1	14.6	80.7
2000	4106900	10.4	10.0919	0.8	3.8846	2.3	0.2843	2.1	0.93	1613.1	30.5	1610.5	18.5	1607.0	15.3	1607.0	15.3	100.4
1494	384318	78.8	10.0891	0.8	3.2384	2.4	0.2370	2.3	0.94	1370.9	28.5	1466.4	19.0	1607.6	15.3	1607.6	15.3	85.3
1860	516217	30.8	10.0645	0.9	3.7103	2.4	0.2708	2.2	0.93	1545.0	30.3	1573.6	18.9	1612.1	15.8	1612.1	15.8	95.8
2189	344731	14.9	10.0254	0.7	3.5469	1.9	0.2579	1.8	0.93	1479.1	23.8	1537.7	15.3	1619.3	12.8	1619.3	12.8	91.3
461	309584	7.4	10.0158	0.7	3.8957	2.4	0.2830	2.3	0.96	1606.4	32.4	1612.8	19.2	1621.1	12.8	1621.1	12.8	99.1
1236	510069	11.6	9.9979	0.9	3.5585	2.7	0.2580	2.5	0.94	1479.8	33.5	1540.3	21.3	1624.4	16.6	1624.4	16.6	91.1
1507	132743	111.5	9.9838	0.9	3.6662	2.4	0.2655	2.3	0.93	1517.8	30.7	1564.0	19.4	1627.1	16.5	1627.1	16.5	93.3
1927	470984	14.6	9.9836	0.6	3.9665	2.4	0.2872	2.3	0.97	1627.6	33.4	1627.4	19.4	1627.1	10.6	1627.1	10.6	100.0
1274	732943	1.6	9.9747	1.2	3.1217	4.7	0.2258	4.5	0.96	1312.6	53.9	1438.1	36.2	1628.8	23.0	1628.8	23.0	80.6
559	867925	8.4	9.9354	0.8	3.9165	2.7	0.2822	2.6	0.96	1602.5	36.3	1617.1	21.6	1636.1	14.4	1636.1	14.4	97.9
1454	72809	7.0	9.9265	0.7	3.3194	2.2	0.2390	2.0	0.94	1381.4	25.1	1485.6	16.8	1637.8	13.7	1637.8	13.7	84.3
858	443499	1.2	9.9149	0.8	3.3621	2.3	0.2418	2.1	0.93	1395.9	26.5	1495.6	17.7	1639.9	15.0	1639.9	15.0	85.1
1303	408555	14.4	9.9098	0.8	3.8327	2.3	0.2755	2.2	0.93	1568.5	30.1	1599.6	18.6	1640.9	15.4	1640.9	15.4	95.6
601	3414584	5.7	9.9034	0.7	3.9387	2.6	0.2829	2.5	0.96	1605.9	35.9	1621.7	21.3	1642.1	13.5	1642.1	13.5	97.8
1803	2358809	122.8	9.9027	0.7	3.8927	2.3	0.2796	2.2	0.95	1589.2	30.5	1612.2	18.4	1642.2	12.8	1642.2	12.8	96.8
1456	1308270	19.9	9.9022	0.8	3.4537	2.6	0.2480	2.5	0.95	1428.3	31.8	1516.7	20.5	1642.3	14.4	1642.3	14.4	87.0
101	59047	1.6	9.9007	1.1	4.0919	3.6	0.2938	3.5	0.95	1660.6	50.8	1652.7	29.7	1642.6	20.2	1642.6	20.2	101.1
2047	1883456	7.3	9.8966	0.7	4.0882	2.2	0.2934	2.1	0.95	1658.7	30.4	1651.9	17.8	1643.4	12.1	1643.4	12.1	100.9
806	832573	12.0	9.8573	0.9	3.2535	2.7	0.2326	2.6	0.95	1348.1	31.5	1470.0	21.2	1650.8	16.4	1650.8	16.4	81.7
1493	430429	31.3	9.8493	0.8	3.9475	2.4	0.2820	2.3	0.95	1601.4	33.0	1623.5	19.8	1652.3	14.2	1652.3	14.2	96.9
673	258689	15.7	9.8462	0.6	3.8910	2.2	0.2779	2.1	0.95	1580.6	29.0	1611.8	17.5	1652.8	11.9	1652.8	11.9	95.6
149	44062	2.1	9.8458	0.7	4.0746	2.3	0.2910	2.2	0.95	1646.3	31.5	1649.2	18.5	1652.9	12.6	1652.9	12.6	99.6
913	89716	1.3	9.8433	0.6	3.4605	2.5	0.2470	2.5	0.97	1423.2	31.3	1518.3	20.0	1653.4	11.9	1653.4	11.9	86.1
1767	253222	14.6	9.8191	0.7	3.9761	2.5	0.2832	2.4	0.96	1607.3	34.1	1629.3	20.4	1658.0	13.6	1658.0	13.6	96.9
917	87466	125.4	9.8095	0.8	3.9871	2.2	0.2837	2.0	0.94	1609.8	28.8	1631.6	17.6	1659.8	14.2	1659.8	14.2	97.0
550	6856572	3.5	9.8068	0.9	3.9516	2.7	0.2811	2.6	0.95	1596.7	36.6	1624.3	22.1	1660.3	15.8	1660.3	15.8	96.2
1165	805769	9.8	9.8028	0.7	4.0045	2.3	0.2847	2.2	0.95	1615.0	31.3	1635.1	18.8	1661.0	13.5	1661.0	13.5	97.2
652	795190	8.3	9.7948	0.6	4.0669	2.2	0.2889	2.1	0.96	1636.0	30.5	1647.7	18.0	1662.5	11.9	1662.5	11.9	98.4
1507	66818	4.6	9.7946	1.0	3.4647	2.9	0.2461	2.7	0.94	1418.4	34.8	1519.2	22.8	1662.6	17.7	1662.6	17.7	85.3
1423	99941	14.9	9.7911	1.0	3.3910	2.6	0.2408	2.4	0.92	1390.9	29.4	1502.3	20.1	1663.2	19.0	1663.2	19.0	83.6
1717	2708330	17.7	9.7803	0.8	3.9601	2.4	0.2809	2.3	0.95	1595.9	32.9	1626.1	19.8	1665.3	14.0	1665.3	14.0	95.8
1202	259923	22.7	9.7795	0.8	3.9050	2.5	0.2770	2.4	0.95	1576.1	33.0	1614.7	20.2	1665.4	14.7	1665.4	14.7	94.6
1127	119234	9.5	9.7777	0.7	3.8897	2.5	0.2758	2.4	0.96	1570.4	33.1	1611.5	19.9	1665.8	12.3	1665.8	12.3	94.3
499	111237	6.6	9.7685	0.9	3.9740	2.3	0.2815	2.2	0.93	1599.2	30.6	1628.9	18.9	1667.5	16.2	1667.5	16.2	95.9
1421	484730	8.1	9.7661	0.8	4.0964	2.1	0.2901	1.9	0.92	1642.3	28.1	1653.6	17.1	1668.0	14.9	1668.0	14.9	98.5
489	203164	6.1	9.7556	0.6	4.1254	2.3	0.2919	2.2	0.96	1651.0	32.5	1659.3	19.0	1670.0	11.6	1670.0	11.6	98.9
926	1202238	174.5	9.7553	0.9	4.0282	2.6	0.2850	2.5	0.94	1616.5	35.3	1639.9	21.3	1670.0	16.0	1670.0	16.0	96.8
1423	63562	21.6	9.7531	0.9	3.7388	2.3	0.2645	2.1	0.91	1512.7	27.8	1579.7	18.0	1670.4	16.8	1670.4	16.8	90.6
301	147315	5.2	9.7490	0.8	4.1146	2.9	0.2909	2.8	0.96	1646.2	40.4	1657.2	23.6	1671.2	14.2	1671.2	14.2	98.5
291	1024250	3.0	9.7471	0.6	4.0053	2.6	0.2831	2.5	0.97	1607.2	35.4	1635.3	20.7	1671.6	10.6	1671.6	10.6	96.1
1615	512717	5.9	9.7420	0.9	3.2780	2.2	0.2316	2.0	0.91	1342.9	24.0	1475.8	16.9	1672.5	16.2	1672.5	16.2	80.3
1404	1313937	3.5	9.7365	0.6	3.9056	2.1	0.2758	2.0	0.96	1570.1	27.7	1614.8	16.8	1673.6	11.3	1673.6	11.3	93.8
742	654716	8.3	9.7320	0.7	3.9976	2.8	0.2822	2.7	0.97	1602.3	39.0	1633.7	23.1	1674.4	13.2	1674.4	13.2	95.7
1030	64643	3.7	9.7246	0.8	3.3395	2.9	0.2355	2.7	0.96	1363.4	33.8	1490.3	22.4	1675.8	15.0	1675.8	15.0	81.4
1016	1557132	24.8	9.7163	0.8	3.9363	2.1	0.2774	1.9	0.93	1578.2	26.7	1621.2	16.7	1677.4	14.1	1677.4	14.1	94.1
934	145198	6.5	9.7027	0.7	4.0604	2.3	0.2857	2.2	0.95	1620.2	30.9	1646.4	18.5	1680.0	13.4	1680.0	13.4	96.4
1269	261664	10.7	9.7010	0.6	4.0836	2.3	0.2873	2.2	0.96	1628.1	32.3	1651.0	19.0	1680.3	11.8	1680.3	11.8	96.9
822	75100	45.8	9.6911	0.7	3.9450	2.6	0.2773	2.5	0.96	1577.7	35.0	1623.0	21.0	1682.2	13.0	1682.2	13.0	93.8
1718	255555	9.5	9.6850	0.8	3.8942	2.2	0.2735	2.1	0.94	1558.7	29.0	1612.5	18.0	1683.4	14.2	1683.4	14.2	92.6

198	124106	5.8	9.6809	0.9	4.0787	2.7	0.2864	2.6	0.95	1623.4	36.7	1650.0	22.0	1684.2	15.9	1684.2	15.9	96.4
1593	468417	5.9	9.6704	0.7	4.0017	2.4	0.2807	2.3	0.96	1594.7	31.9	1634.5	19.2	1686.2	12.4	1686.2	12.4	94.6
1331	460542	22.8	9.6686	0.8	3.9015	2.4	0.2736	2.3	0.94	1559.0	31.9	1614.0	19.7	1686.5	14.8	1686.5	14.8	92.4
767	200416	3.5	9.6662	0.5	3.8855	2.8	0.2724	2.7	0.98	1553.0	37.6	1610.7	22.5	1687.0	10.1	1687.0	10.1	92.1
76	63786	4.8	9.6653	1.1	3.9437	3.6	0.2765	3.4	0.96	1573.5	48.1	1622.7	29.2	1687.1	19.4	1687.1	19.4	93.3
1569	359760	3.3	9.6637	0.6	3.6350	2.3	0.2548	2.2	0.96	1463.0	28.4	1557.2	17.9	1687.4	11.2	1687.4	11.2	86.7
1297	42660	6.0	9.6545	0.6	3.4920	2.4	0.2445	2.4	0.97	1410.1	29.9	1525.4	19.3	1689.2	11.7	1689.2	11.7	83.5
410	946819	7.2	9.6494	0.9	4.2037	2.9	0.2942	2.8	0.96	1662.5	41.1	1674.8	24.0	1690.2	15.8	1690.2	15.8	98.4
1136	24764	8.1	9.6364	0.7	3.9718	2.4	0.2776	2.2	0.96	1579.2	31.5	1628.5	19.1	1692.7	12.7	1692.7	12.7	93.3
1436	337981	10.7	9.6236	0.8	4.1645	2.8	0.2907	2.7	0.96	1644.9	39.5	1667.1	23.1	1695.1	13.9	1695.1	13.9	97.0
290	112921	51.3	9.6225	0.8	4.0033	2.7	0.2794	2.5	0.95	1588.3	35.8	1634.9	21.7	1695.3	14.7	1695.3	14.7	93.7
535	150341	3.8	9.6073	0.7	4.1730	2.4	0.2908	2.3	0.95	1645.4	33.2	1668.7	19.6	1698.2	13.2	1698.2	13.2	96.9
952	240076	5.9	9.6061	0.7	4.0159	2.4	0.2798	2.3	0.95	1590.3	32.7	1637.4	19.8	1698.5	13.5	1698.5	13.5	93.6
1163	44885	1.1	9.5957	0.7	3.7101	2.2	0.2582	2.1	0.95	1480.7	28.1	1573.6	18.0	1700.5	13.4	1700.5	13.4	87.1
1981	300643	84.3	9.5949	0.7	3.7605	2.2	0.2617	2.1	0.96	1498.5	28.6	1584.4	17.9	1700.6	12.0	1700.6	12.0	88.1
210	193234	4.1	9.5936	0.7	4.3480	3.0	0.3025	2.9	0.97	1703.8	44.1	1702.5	25.0	1700.9	13.3	1700.9	13.3	100.2
556	3851313	7.9	9.5875	0.7	4.1987	2.7	0.2920	2.6	0.96	1651.3	37.5	1673.8	22.0	1702.0	13.6	1702.0	13.6	97.0
856	953381	4.0	9.5746	0.7	4.1485	2.2	0.2881	2.1	0.95	1631.9	29.6	1663.9	17.7	1704.5	12.4	1704.5	12.4	95.7
835	1077927	4.1	9.5668	0.7	4.1731	2.6	0.2895	2.5	0.96	1639.3	36.8	1668.8	21.6	1706.0	12.8	1706.0	12.8	96.1
1170	116640	30.7	9.5568	0.6	4.0359	2.1	0.2797	2.0	0.96	1590.0	28.8	1641.5	17.3	1707.9	10.9	1707.9	10.9	93.1
530	238217	7.1	9.5554	0.6	4.2149	2.4	0.2921	2.3	0.97	1652.0	33.8	1676.9	19.7	1708.2	11.3	1708.2	11.3	96.7
1197	181806	22.8	9.5537	0.8	3.9594	2.0	0.2743	1.8	0.91	1562.8	25.2	1625.9	16.2	1708.5	15.4	1708.5	15.4	91.5
461	1003874	3.7	9.5451	0.6	4.5095	2.2	0.3122	2.1	0.96	1751.4	32.8	1732.7	18.5	1710.2	11.1	1710.2	11.1	102.4
1037	308580	20.4	9.5405	0.7	3.9184	2.5	0.2711	2.4	0.96	1546.5	33.2	1617.5	20.3	1711.1	12.8	1711.1	12.8	90.4
1523	1273234	5.1	9.5403	0.8	4.2504	2.5	0.2941	2.4	0.95	1662.0	35.4	1683.8	20.9	1711.1	14.3	1711.1	14.3	97.1
369	122762	2.9	9.5367	0.7	4.4217	2.0	0.3058	1.9	0.95	1720.2	28.5	1716.4	16.5	1711.8	12.0	1711.8	12.0	100.5
988	75996	3.1	9.5360	0.7	4.0680	2.4	0.2814	2.3	0.96	1598.2	32.5	1647.9	19.5	1711.9	12.3	1711.9	12.3	93.4
611	248188	5.1	9.5330	0.7	4.1316	2.5	0.2857	2.4	0.97	1619.8	34.5	1660.6	20.4	1712.5	12.0	1712.5	12.0	94.6
1269	35599	4.2	9.5293	0.8	4.1279	2.5	0.2853	2.4	0.95	1618.0	34.0	1659.8	20.5	1713.2	14.6	1713.2	14.6	94.4
783	772247	28.2	9.5285	0.8	4.2801	1.9	0.2958	1.8	0.92	1670.4	26.0	1689.5	15.8	1713.4	13.9	1713.4	13.9	97.5
626	2147905	3.3	9.5221	0.7	4.4206	2.5	0.3053	2.4	0.95	1717.5	36.1	1716.2	20.7	1714.6	13.7	1714.6	13.7	100.2
1303	161946	4.0	9.5197	0.7	4.0275	1.9	0.2781	1.8	0.93	1581.7	25.1	1639.8	15.6	1715.1	12.6	1715.1	12.6	92.2
332	17478	7.4	9.5140	1.0	4.1582	3.0	0.2869	2.8	0.95	1626.1	40.8	1665.8	24.5	1716.2	17.7	1716.2	17.7	94.8
714	13724	5.2	9.5125	0.8	3.5442	2.7	0.2445	2.6	0.96	1410.1	33.2	1537.1	21.6	1716.5	14.0	1716.5	14.0	82.2
339	153663	4.1	9.5119	0.7	4.4044	2.6	0.3038	2.5	0.96	1710.4	38.2	1713.2	21.9	1716.6	13.6	1716.6	13.6	99.6
1061	144802	7.2	9.5065	0.9	4.0963	3.0	0.2824	2.9	0.96	1603.6	40.5	1653.6	24.3	1717.6	15.9	1717.6	15.9	93.4
1116	2141330	78.8	9.5013	0.8	4.1538	2.3	0.2862	2.2	0.94	1622.7	30.9	1665.0	18.7	1718.6	14.4	1718.6	14.4	94.4
457	276012	1.2	9.4897	0.5	4.4227	2.5	0.3044	2.4	0.98	1713.1	36.5	1716.6	20.6	1720.9	9.5	1720.9	9.5	99.5
948	533790	10.6	9.4845	0.7	4.3277	2.7	0.2977	2.6	0.96	1679.9	38.1	1698.7	22.0	1721.9	13.0	1721.9	13.0	97.6
189	129074	5.6	9.4746	0.8	4.3699	3.0	0.3003	2.9	0.96	1692.7	43.5	1706.7	25.1	1723.8	15.0	1723.8	15.0	98.2
1451	531600	10.0	9.4745	0.6	3.9701	2.5	0.2728	2.4	0.97	1555.0	33.5	1628.1	20.3	1723.8	11.6	1723.8	11.6	90.2
800	11304465	1.3	9.4731	0.8	4.4583	2.3	0.3063	2.2	0.93	1722.5	32.6	1723.2	19.2	1724.1	15.3	1724.1	15.3	99.9
1093	31054	3.3	9.4700	0.9	3.9784	3.2	0.2732	3.0	0.96	1557.3	42.1	1629.8	25.6	1724.7	15.8	1724.7	15.8	90.3
228	257494	4.4	9.4564	0.9	4.5681	3.5	0.3133	3.4	0.97	1756.9	52.8	1743.5	29.5	1727.4	16.3	1727.4	16.3	101.7
1119	140135	2.0	9.4463	0.7	3.9116	3.1	0.2680	3.1	0.97	1530.6	41.7	1616.1	25.4	1729.3	13.5	1729.3	13.5	88.5
1031	307511	108.3	9.4383	0.7	4.4496	2.4	0.3046	2.3	0.96	1714.0	34.8	1721.6	20.0	1730.9	12.9	1730.9	12.9	99.0
174	99596	2.6	9.4336	0.8	4.5056	2.4	0.3083	2.3	0.95	1732.2	34.8	1732.0	20.1	1731.8	13.9	1731.8	13.9	100.0
1243	232908	22.3	9.4275	0.8	3.9572	2.1	0.2706	2.0	0.93	1543.7	27.0	1625.5	17.2	1733.0	14.3	1733.0	14.3	89.1
741	291713	6.5	9.3993	0.7	4.5080	2.6	0.3073	2.5	0.96	1727.5	37.4	1732.5	21.4	1738.5	13.7	1738.5	13.7	99.4
1134	226895	14.5	9.3969	0.8	4.3012	2.0	0.2931	1.9	0.92	1657.2	27.1	1693.6	16.6	1738.9	14.4	1738.9	14.4	95.3
350	252634	5.3	9.3906	0.8	4.6987	3.0	0.3200	2.9	0.96	1789.8	45.1	1767.0	25.1	1740.2	15.2	1740.2	15.2	102.9
1665	30241	3.8	9.3696	0.6	4.2226	2.3	0.2869	2.3	0.96	1626.2	32.4	1678.4	19.2	1744.2	11.5	1744.2	11.5	93.2
1039	189696	1.5	9.3666	0.8	4.3379	2.0	0.2947	1.9	0.92	1664.9	27.3	1700.6	16.8	1744.8	14.9	1744.8	14.9	95.4
441	48686	4.2	9.3616	0.8	4.3340	2.2	0.2943	2.1	0.94	1662.8	30.8	1699.9	18.4	1745.8	13.8	1745.8	13.8	95.2
949	403215	8.5	9.3613	0.7	4.4556	2.1	0.3025	2.0	0.95	1703.7	30.2	1722.7	17.7	1745.9	12.5	1745.9	12.5	97.6
740	2061278	1.1	9.3507	0.8	4.6291	2.6	0.3139	2.5	0.95	1760.0	38.4	1754.5	21.8	1748.0	14.5	1748.0	14.5	100.7
207	1455522	5.4	9.3365	0.8	4.4755	3.4	0.3031	3.3	0.97	1706.4	49.0	1726.4	27.9	1750.7	14.3	1750.7	14.3	97.5
798	251438	7.8	9.3303	0.5	4.6002	2.1	0.3113	2.0	0.97	1747.1	31.1	1749.3	17.4	1752.0	9.1	1752.0	9.1	99.7
498	625333	2.3	9.2912	0.9	4.5562	2.3	0.3070	2.1	0.92	1726.1	32.3	1741.3	19.4	1759.6	16.9	1759.6	16.9	98.1
788	285372	1.1	9.2829	0.8	4.6355	2.3	0.3121	2.2	0.95	1751.0	33.7	1755.7	19.4	1761.3	13.8	1761.3	13.8	99.4
209	166241	1.7	9.2799	0.9	4.5936	2.9	0.3092	2.8	0.95	1736.6	42.7	1748.1	24.6	1761.9	16.8	1761.9	16.8	98.6
346	802737	1.8	9.2760	0.8	4.5755	3.4	0.3078	3.3	0.97	1730.0	49.6	1744.8	28.0	1762.6	14.5	1762.6	14.5	98.1
741	345319	23.7	9.2511	0.7	4.3881	2.5	0.2944	2.4	0.96	1663.6	35.1	1710.1	20.6	1767.5	12.6	1767.5	12.6	94.1

706	15753	4.3	9.2335	1.0	4.1217	2.2	0.2760	2.0	0.88	1571.3	27.6	1658.6	18.3	1771.0	19.1	1771.0	19.1	88.7
222	69842	1.9	9.2281	0.6	4.6583	2.2	0.3118	2.1	0.96	1749.4	31.8	1759.8	18.1	1772.1	11.2	1772.1	11.2	98.7
730	82424	5.6	9.2241	0.8	4.0465	2.2	0.2707	2.1	0.93	1544.4	28.4	1643.6	18.0	1772.9	14.4	1772.9	14.4	87.1
215	40548	2.2	9.2081	0.9	4.6228	3.1	0.3087	3.0	0.96	1734.4	45.3	1753.4	26.0	1776.1	16.5	1776.1	16.5	97.7
868	135490	4.1	9.1912	0.6	4.4346	2.2	0.2956	2.1	0.96	1669.5	31.4	1718.8	18.4	1779.4	10.7	1779.4	10.7	93.8
221	73191	1.8	9.1908	0.9	4.5561	2.6	0.3037	2.5	0.94	1709.6	37.5	1741.3	22.0	1779.5	15.9	1779.5	15.9	96.1
1434	7380422	51.2	9.1799	1.1	4.2778	2.9	0.2848	2.7	0.92	1615.5	37.9	1689.1	23.8	1781.6	20.9	1781.6	20.9	90.7
1053	11842	23.0	9.1557	0.9	3.9549	2.7	0.2626	2.5	0.95	1503.2	34.2	1625.0	21.8	1786.5	15.5	1786.5	15.5	84.1
109	44460	1.8	9.1507	0.7	4.7138	2.7	0.3128	2.6	0.96	1754.7	40.4	1769.7	22.9	1787.4	13.2	1787.4	13.2	98.2
861	15885	10.9	9.1071	0.8	4.6210	2.6	0.3052	2.5	0.95	1717.2	37.8	1753.1	22.0	1796.2	14.3	1796.2	14.3	95.6
239	58291	2.9	9.1031	0.6	4.8714	2.1	0.3216	2.0	0.96	1797.6	31.1	1797.3	17.4	1797.0	10.7	1797.0	10.7	100.0
936	246813	24.0	8.9821	0.9	4.8016	2.0	0.3128	1.8	0.89	1754.5	28.0	1785.2	17.2	1821.3	16.8	1821.3	16.8	96.3
903	9137	21.0	8.9111	0.8	4.3463	2.1	0.2809	2.0	0.93	1595.9	27.7	1702.2	17.4	1835.7	14.1	1835.7	14.1	86.9
48	6922	4.3	8.8756	1.1	4.6801	3.8	0.3013	3.7	0.96	1697.6	54.8	1763.7	32.1	1842.9	20.2	1842.9	20.2	92.1
341	493941	4.0	8.8312	0.8	5.1069	2.8	0.3271	2.7	0.96	1824.3	42.3	1837.3	23.6	1851.9	14.2	1851.9	14.2	98.5
699	134733	27.8	8.7026	0.8	4.9464	2.7	0.3122	2.6	0.95	1751.5	39.6	1810.2	22.9	1878.4	15.0	1878.4	15.0	93.2
1334	748146	172.8	8.5770	0.5	5.2502	1.7	0.3266	1.7	0.96	1821.8	26.3	1860.8	14.8	1904.6	9.1	1904.6	9.1	95.7
559	168526	10.5	8.4963	0.7	5.0557	2.7	0.3115	2.6	0.97	1748.3	40.5	1828.7	23.1	1921.5	11.9	1921.5	11.9	91.0
279	283949	2.6	8.4675	1.0	5.2161	4.5	0.3203	4.3	0.98	1791.4	67.9	1855.3	38.0	1927.6	17.7	1927.6	17.7	92.9
262	412872	2.8	8.4630	0.7	5.9528	2.9	0.3654	2.8	0.97	2007.6	49.2	1969.0	25.6	1928.6	13.0	1928.6	13.0	104.1
268	402449	5.4	8.4319	0.8	5.8509	2.9	0.3578	2.8	0.96	1971.8	47.0	1954.0	24.9	1935.2	13.9	1935.2	13.9	101.9
353	115159	4.2	8.4272	0.6	5.0494	2.3	0.3086	2.2	0.96	1733.9	33.0	1827.6	19.2	1936.2	11.2	1936.2	11.2	89.6
1441	317598	4.0	8.2790	0.8	4.6079	2.4	0.2767	2.2	0.94	1574.6	31.3	1750.7	19.9	1967.9	14.7	1967.9	14.7	80.0
148	65146	2.7	8.1148	1.3	5.5649	3.5	0.3275	3.3	0.93	1826.3	52.4	1910.7	30.4	2003.5	22.7	2003.5	22.7	91.2
885	214699	4.7	8.0932	0.7	5.5911	2.2	0.3282	2.1	0.95	1829.6	33.9	1914.7	19.4	2008.2	12.8	2008.2	12.8	91.1
1012	22331	6.1	7.9670	1.3	5.3751	2.5	0.3106	2.2	0.87	1743.6	33.9	1880.9	21.8	2036.1	22.3	2036.1	22.3	85.6
1000	140764	11.7	7.9632	2.2	5.6916	3.5	0.3287	2.7	0.77	1832.2	42.7	1930.1	30.2	2036.9	39.8	2036.9	39.8	89.9
305	51080	4.2	7.9172	0.7	5.6581	2.7	0.3249	2.6	0.97	1813.6	41.5	1925.0	23.4	2047.2	11.9	2047.2	11.9	88.6
1039	243319	26.3	7.9068	0.9	5.5508	2.3	0.3183	2.1	0.92	1781.5	32.9	1908.5	19.8	2049.5	15.9	2049.5	15.9	86.9
1013	181953	199.9	7.8895	0.9	5.8968	2.5	0.3374	2.3	0.94	1874.2	37.4	1960.8	21.3	2053.4	15.2	2053.4	15.2	91.3
253	427447	4.0	7.7681	0.9	5.2652	2.6	0.2966	2.4	0.93	1674.6	35.4	1863.2	22.0	2080.7	16.4	2080.7	16.4	80.5
573	360109	8.7	7.6981	0.7	6.0549	2.3	0.3381	2.1	0.95	1877.3	35.0	1983.8	19.7	2096.6	12.3	2096.6	12.3	89.5
160	300357	3.3	7.6439	1.0	6.3052	3.9	0.3495	3.8	0.97	1932.4	63.0	2019.2	34.2	2109.0	17.2	2109.0	17.2	91.6
210	1646979	3.1	7.5555	1.1	6.1774	3.5	0.3385	3.4	0.95	1879.5	54.8	2001.3	31.0	2129.4	19.6	2129.4	19.6	88.3
173	81306	2.6	7.5511	1.1	5.8796	3.1	0.3220	2.9	0.93	1799.5	44.8	1958.2	26.6	2130.4	19.8	2130.4	19.8	84.5
2128	110925	1.5	7.4628	0.6	6.0930	1.8	0.3298	1.7	0.93	1837.3	26.9	1989.2	15.7	2151.0	11.2	2151.0	11.2	85.4
137	200086	2.7	7.4565	0.7	6.5050	2.9	0.3518	2.8	0.97	1943.1	47.2	2046.6	25.6	2152.5	12.6	2152.5	12.6	90.3
1193	2785380	3.5	7.3949	0.9	6.6378	2.2	0.3560	2.0	0.92	1963.2	34.7	2064.4	19.7	2167.0	15.7	2167.0	15.7	90.6
534	20409	3.4	7.3605	0.9	6.8949	2.6	0.3681	2.4	0.94	2020.3	42.5	2098.0	23.0	2175.1	15.0	2175.1	15.0	92.9
447	306764	5.1	7.3540	1.1	6.7380	3.1	0.3594	2.9	0.93	1979.2	49.1	2077.6	27.3	2176.6	19.3	2176.6	19.3	90.9
270	461387	4.4	7.3258	0.8	7.2615	2.4	0.3858	2.3	0.94	2103.4	41.2	2144.1	21.7	2183.3	14.0	2183.3	14.0	96.3
132	118371	2.3	7.2450	0.6	7.3802	2.7	0.3878	2.6	0.98	2112.6	47.7	2158.6	24.3	2202.6	10.3	2202.6	10.3	95.9
1128	96651	3.9	7.2355	1.0	6.9654	2.5	0.3655	2.2	0.91	2008.3	38.7	2107.0	21.9	2204.8	17.5	2204.8	17.5	91.1
2600	644472	4.5	7.1655	0.7	6.5288	2.2	0.3393	2.1	0.94	1883.3	34.2	2049.8	19.6	2221.7	12.9	2221.7	12.9	84.8
408	149257	1.6	7.1244	0.9	7.4754	3.1	0.3863	2.9	0.96	2105.5	52.9	2170.0	27.5	2231.7	15.1	2231.7	15.1	94.3
119	42248	2.5	7.1142	0.6	7.2756	2.7	0.3754	2.6	0.98	2054.8	45.6	2145.8	23.7	2234.1	10.0	2234.1	10.0	92.0
191	203271	3.5	7.1136	1.0	7.2962	3.2	0.3764	3.1	0.95	2059.6	54.0	2148.3	28.8	2234.3	17.8	2234.3	17.8	92.2
131	96747	2.8	7.1053	0.9	7.0095	3.2	0.3612	3.1	0.96	1987.9	52.5	2112.6	28.4	2236.3	15.6	2236.3	15.6	88.9
144	435587	2.7	7.1007	0.8	7.7127	3.2	0.3972	3.1	0.97	2156.1	57.3	2198.1	29.0	2237.4	14.0	2237.4	14.0	96.4
2539	500548	1.0	7.0934	0.6	6.2702	1.8	0.3226	1.7	0.95	1802.3	27.1	2014.3	15.9	2239.2	9.7	2239.2	9.7	80.5
126	56978	2.8	7.0541	0.8	7.4278	3.6	0.3800	3.5	0.97	2076.4	61.9	2164.3	32.1	2248.8	14.2	2248.8	14.2	92.3
525	202866	3.0	7.0458	1.2	7.9724	2.5	0.4074	2.2	0.88	2203.0	40.6	2227.9	22.2	2250.9	20.1	2250.9	20.1	97.9
186	50998	2.3	7.0220	0.8	7.5325	2.9	0.3836	2.8	0.96	2093.2	50.6	2176.9	26.4	2256.7	14.1	2256.7	14.1	92.8
144	305660	3.5	6.9994	0.9	8.0308	3.2	0.4077	3.0	0.96	2204.3	56.7	2234.5	28.5	2262.3	14.9	2262.3	14.9	97.4
440	164087	2.3	6.9980	0.8	7.8748	2.9	0.3997	2.7	0.96	2167.6	50.5	2216.8	25.7	2262.6	13.5	2262.6	13.5	95.8
379	386017	1.3	6.9860	0.7	8.0663	3.1	0.4087	3.0	0.97	2209.0	56.2	2238.5	28.0	2265.6	12.9	2265.6	12.9	97.5
146	131391	2.4	6.9753	0.8	7.5921	3.2	0.3841	3.2	0.97	2095.3	56.4	2183.9	29.1	2268.2	13.1	2268.2	13.1	92.4
196	486372	2.4	6.9724	0.8	8.1285	2.3	0.4110	2.1	0.94	2219.7	40.2	2245.4	20.6	2268.9	13.3	2268.9	13.3	97.8
145	57458	2.6	6.9722	0.9	8.0267	2.9	0.4059	2.8	0.96	2196.1	52.3	2234.0	26.5	2269.0	14.7	2269.0	14.7	96.8
1482	737462	2.5	6.9655	0.7	7.3425	2.0	0.3709	1.9	0.94	2033.8	32.4	2154.0	17.6	2270.6	11.5	2270.6	11.5	89.6
176	53344	1.9	6.9436	0.8	7.6482	3.2	0.3852	3.1	0.97	2100.3	56.3	2190.5	29.1	2276.1	14.0	2276.1	14.0	92.3
314	279308	2.5	6.9313	0.8	8.0660	2.6	0.4055	2.4	0.96	2194.2	45.3	2238.4	23.1	2279.1	12.9	2279.1	12.9	96.3
978	698630	2.2	6.8813	1.1	8.2627	2.2	0.4124	1.9	0.87	2225.8	36.3	2260.2	20.1	2291.6	18.9	2291.6	18.9	97.1

225	392898	1.8	6.8738	1.0	8.1014	2.9	0.4039	2.8	0.95	2186.9	51.7	2242.4	26.7	2293.5	16.4	2293.5	16.4	95.4
160	77532	2.3	6.8681	0.7	7.8607	2.2	0.3916	2.1	0.95	2130.0	38.2	2215.2	19.9	2294.9	11.5	2294.9	11.5	92.8
375	130921	2.8	6.8432	0.8	7.9757	3.0	0.3958	2.9	0.96	2149.9	53.0	2228.3	27.2	2301.1	14.1	2301.1	14.1	93.4
165	674558	2.1	6.8378	0.9	8.2638	3.3	0.4098	3.2	0.96	2214.1	60.2	2260.4	30.3	2302.5	16.2	2302.5	16.2	96.2
371	588234	2.0	6.7908	0.7	8.4462	3.0	0.4160	2.9	0.97	2242.2	55.8	2280.2	27.5	2314.3	11.9	2314.3	11.9	96.9
248	84878	2.4	6.7383	0.9	8.7599	2.5	0.4281	2.3	0.94	2297.2	44.5	2313.3	22.4	2327.6	14.9	2327.6	14.9	98.7
527	277265	0.2	6.7379	1.6	7.4593	4.0	0.3645	3.6	0.92	2003.6	62.6	2168.1	35.5	2327.7	26.9	2327.7	26.9	86.1
868	31837	2.5	6.7315	0.9	8.2875	2.4	0.4046	2.3	0.93	2190.2	41.8	2263.0	21.9	2329.3	14.9	2329.3	14.9	94.0
444	157275	1.8	6.7194	0.8	7.9523	2.8	0.3875	2.7	0.96	2111.4	47.9	2225.6	25.0	2332.4	13.4	2332.4	13.4	90.5
1794	2076715	1.4	6.6909	0.7	8.6713	2.4	0.4208	2.3	0.96	2264.1	43.1	2304.1	21.5	2339.7	11.9	2339.7	11.9	96.8
133	114876	2.0	6.6871	0.7	8.8932	3.2	0.4313	3.2	0.98	2311.7	61.7	2327.1	29.6	2340.7	11.4	2340.7	11.4	98.8
183	367836	2.5	6.6835	0.8	8.5787	3.0	0.4158	2.9	0.96	2241.6	54.1	2294.3	27.1	2341.6	14.5	2341.6	14.5	95.7
816	40027	9.2	6.6820	1.1	8.2988	2.8	0.4022	2.6	0.91	2179.1	47.5	2264.2	25.5	2342.0	19.5	2342.0	19.5	93.0
217	212417	3.2	6.6635	0.8	8.3635	2.8	0.4042	2.7	0.95	2188.3	49.5	2271.2	25.4	2346.7	14.4	2346.7	14.4	93.2
131	341201	2.2	6.6288	0.8	8.9800	3.0	0.4317	2.9	0.96	2313.5	57.0	2336.0	27.8	2355.6	13.6	2355.6	13.6	98.2
1526	198887	2.1	6.6271	0.8	9.0062	2.6	0.4329	2.5	0.96	2318.7	48.3	2338.6	23.7	2356.1	13.1	2356.1	13.1	98.4
149	50354	2.4	6.6260	0.9	8.5142	3.3	0.4092	3.1	0.96	2211.1	58.4	2287.4	29.6	2356.4	15.9	2356.4	15.9	93.8
641	326379	1.6	6.6259	0.8	8.5681	2.8	0.4117	2.7	0.96	2222.9	51.2	2293.2	25.8	2356.4	13.8	2356.4	13.8	94.3
106	166699	2.6	6.6195	0.7	8.7790	2.8	0.4215	2.7	0.97	2267.2	52.2	2315.3	25.8	2358.0	12.3	2358.0	12.3	96.1
157	59732	2.2	6.6107	0.9	8.8674	3.7	0.4251	3.6	0.97	2283.8	68.5	2324.5	33.5	2360.3	15.4	2360.3	15.4	96.8
1057	182801	2.2	6.5922	0.7	8.9824	2.4	0.4295	2.3	0.96	2303.3	44.4	2336.2	21.9	2365.1	11.7	2365.1	11.7	97.4
163	780662	2.3	6.5842	0.8	9.3391	3.3	0.4460	3.2	0.97	2377.3	63.0	2371.9	29.9	2367.2	13.0	2367.2	13.0	100.4
131	129273	2.2	6.5353	0.7	8.9006	3.1	0.4219	3.0	0.97	2269.0	57.9	2327.9	28.4	2379.9	12.3	2379.9	12.3	95.3
552	135895	1.7	6.5158	0.7	8.9971	2.3	0.4252	2.2	0.95	2283.9	42.1	2337.7	21.1	2385.0	12.5	2385.0	12.5	95.8
883	4023852	3.7	6.5110	0.8	8.7536	2.2	0.4134	2.0	0.94	2230.3	38.0	2312.7	19.6	2386.2	13.0	2386.2	13.0	93.5
103	385417	2.4	6.4986	0.8	9.3515	3.5	0.4408	3.3	0.97	2354.0	66.1	2373.1	31.7	2389.5	14.3	2389.5	14.3	98.5
206	57239	1.8	6.4897	0.8	8.2458	3.1	0.3881	3.0	0.97	2114.1	53.6	2258.4	27.9	2391.8	13.6	2391.8	13.6	88.4
169	68026	2.0	6.4873	0.9	9.5108	3.0	0.4475	2.8	0.95	2384.1	56.1	2388.6	27.1	2392.4	15.0	2392.4	15.0	99.7
82	281630	3.0	6.4793	0.9	9.2615	4.1	0.4352	4.0	0.98	2329.2	77.8	2364.2	37.3	2394.5	14.6	2394.5	14.6	97.3
105	37518	2.3	6.4782	0.8	9.1274	3.4	0.4288	3.3	0.97	2300.5	63.4	2350.9	31.0	2394.8	14.4	2394.8	14.4	96.1
121	50384	2.7	6.4662	0.7	9.0509	3.2	0.4245	3.2	0.97	2280.7	60.6	2343.2	29.7	2398.0	12.7	2398.0	12.7	95.1
869	215772	2.2	6.4661	2.0	8.1949	2.9	0.3843	2.2	0.74	2096.4	39.2	2252.8	26.7	2398.0	33.5	2398.0	33.5	87.4
789	958520	1.8	6.4622	0.7	9.2194	2.0	0.4321	1.9	0.94	2315.2	36.4	2360.0	18.3	2399.0	12.0	2399.0	12.0	96.5
135	87527	1.9	6.4471	0.8	9.4144	2.9	0.4402	2.8	0.96	2351.6	55.0	2379.2	26.6	2403.0	13.5	2403.0	13.5	97.9
130	83447	2.3	6.4326	0.8	9.2725	2.8	0.4326	2.7	0.96	2317.4	52.9	2365.3	25.9	2406.8	12.9	2406.8	12.9	96.3
90	91450	2.5	6.3984	0.7	9.3264	3.6	0.4328	3.5	0.98	2318.3	68.0	2370.6	32.7	2415.9	12.0	2415.9	12.0	96.0
177	117225	2.0	6.3914	0.8	9.8099	2.8	0.4547	2.6	0.96	2416.3	53.3	2417.1	25.4	2417.7	13.0	2417.7	13.0	99.9
89	29655	2.5	6.3812	0.8	9.7150	4.2	0.4496	4.2	0.98	2393.5	83.0	2408.1	38.9	2420.5	12.8	2420.5	12.8	98.9
116	16525	2.1	6.3759	0.8	9.3436	2.8	0.4321	2.7	0.96	2315.0	52.1	2372.3	25.6	2421.9	13.1	2421.9	13.1	95.6
535	338128	1.5	6.3709	0.8	9.7770	2.6	0.4518	2.4	0.95	2403.1	48.9	2414.0	23.6	2423.2	13.4	2423.2	13.4	99.2
685	1464335	1.6	6.3624	0.5	9.6982	2.3	0.4475	2.2	0.97	2384.2	44.3	2406.5	21.1	2425.5	9.3	2425.5	9.3	98.3
208	359416	1.3	6.3538	0.9	8.8765	3.0	0.4090	2.9	0.95	2210.6	54.3	2325.4	27.8	2427.8	15.8	2427.8	15.8	91.1
1003	1994509	2.0	6.3488	0.8	8.9763	2.2	0.4133	2.1	0.93	2230.1	39.4	2335.6	20.5	2429.1	13.8	2429.1	13.8	91.8
586	268202	1.5	6.3408	0.8	8.8890	2.5	0.4088	2.4	0.95	2209.4	44.3	2326.7	22.7	2431.2	12.9	2431.2	12.9	90.9
1301	4380202	3.6	6.3247	0.7	9.4475	2.4	0.4334	2.3	0.95	2320.9	44.8	2382.5	22.2	2435.5	12.6	2435.5	12.6	95.3
301	109530	15.3	6.3129	0.6	9.3551	2.5	0.4283	2.4	0.97	2298.2	46.2	2373.4	22.6	2438.7	10.3	2438.7	10.3	94.2
177	66340	2.1	6.2852	1.2	9.2825	3.3	0.4231	3.1	0.93	2274.7	58.8	2366.3	30.3	2446.1	20.9	2446.1	20.9	93.0
249	291556	2.3	6.2847	0.6	10.3663	3.0	0.4725	2.9	0.98	2494.5	59.9	2468.0	27.4	2446.3	10.5	2446.3	10.5	102.0
169	75783	1.8	6.2639	0.6	10.0651	3.1	0.4573	3.0	0.98	2427.5	60.4	2440.8	28.2	2451.9	10.8	2451.9	10.8	99.0
987	368124	2.1	6.2391	1.0	8.6758	2.9	0.3926	2.8	0.93	2134.8	50.1	2304.5	26.8	2458.6	17.7	2458.6	17.7	86.8
96	315746	1.5	6.2308	0.9	8.8683	3.5	0.4008	3.3	0.96	2172.5	61.6	2324.5	31.6	2460.8	15.4	2460.8	15.4	88.3
123	2166019	2.2	6.2305	0.9	10.2464	3.9	0.4630	3.8	0.97	2452.8	77.4	2457.3	36.1	2460.9	15.1	2460.9	15.1	99.7
130	111190	2.0	6.2237	0.6	10.0523	3.4	0.4537	3.4	0.98	2411.9	67.5	2439.6	31.5	2462.8	10.8	2462.8	10.8	97.9
846	151212	2.5	6.1343	0.9	8.3543	2.5	0.3717	2.4	0.93	2037.3	41.1	2270.2	22.8	2487.2	15.1	2487.2	15.1	81.9
238	209423	2.0	5.9838	0.7	10.6333	3.2	0.4615	3.1	0.98	2446.1	63.5	2491.6	29.6	2529.0	11.2	2529.0	11.2	96.7
699	794349	1.3	5.9569	0.7	9.4131	2.6	0.4067	2.5	0.96	2199.7	47.2	2379.1	24.2	2536.5	12.0	2536.5	12.0	86.7
297	293517	3.5	5.9457	1.1	10.8310	2.7	0.4671	2.5	0.92	2470.7	51.2	2508.7	25.2	2539.7	17.9	2539.7	17.9	97.3
520	170107	2.3	5.9300	0.6	10.3491	2.2	0.4451	2.2	0.97	2373.4	42.8	2466.5	20.6	2544.1	9.4	2544.1	9.4	93.3
490	749161	2.4	5.8437	0.9	10.1864	2.8	0.4317	2.7	0.95	2313.5	52.5	2451.8	26.3	2568.7	14.7	2568.7	14.7	90.1
1165	75692	2.0	5.7788	0.9	10.9958	2.5	0.4609	2.4	0.94	2443.3	47.8	2522.8	23.4	2587.3	14.6	2587.3	14.6	94.4
207	44079	1.2	5.7650	0.8	11.2583	4.7	0.4707	4.6	0.98	2486.8	95.9	2544.8	44.0	2591.3	13.8	2591.3	13.8	96.0
375	250247	0.6	5.7417	0.8	11.7531	2.4	0.4894	2.3	0.95	2568.2	48.8	2584.9	22.8	2598.1	13.1	2598.1	13.1	98.9
191	5412809	1.7	5.7129	0.7	11.0209	3.0	0.4566	2.9	0.97	2424.7	58.9	2524.9	27.9	2606.4	11.3	2606.4	11.3	93.0

Foundation Ice Stream Rocks

YAR 1 R-2 (Patuxent Fm. Bedrock)

U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
315	26010	1.1	17.5303	1.0	0.6085	2.2	0.0774	2.0	0.89	480.4	9.1	482.6	8.5	493.2	21.9	480.4	9.1	97.4
429	289879	1.1	17.5509	0.6	0.6139	2.1	0.0781	2.0	0.96	485.1	9.4	486.0	8.1	490.6	13.5	485.1	9.4	98.9
204	145004	3.0	17.2017	1.1	0.6266	2.6	0.0782	2.4	0.90	485.2	11.0	494.0	10.2	534.8	24.4	485.2	11.0	90.7
441	39743	1.9	17.6955	0.7	0.6094	2.0	0.0782	1.9	0.94	485.4	8.8	483.2	7.8	472.5	15.7	485.4	8.8	102.7
647	26931	4.7	17.1772	0.7	0.6278	1.6	0.0782	1.5	0.91	485.5	7.0	494.8	6.4	537.9	14.8	485.5	7.0	90.2
608	76793	1.3	17.3932	0.9	0.6207	2.2	0.0783	2.0	0.91	486.0	9.6	490.3	8.7	510.5	20.0	486.0	9.6	95.2
307	37951	2.1	17.4617	0.9	0.6196	2.3	0.0785	2.1	0.91	487.0	9.7	489.6	8.8	501.9	20.1	487.0	9.7	97.0
336	23728	1.7	17.5081	0.7	0.6205	2.0	0.0788	1.8	0.93	488.9	8.6	490.1	7.6	496.0	16.0	488.9	8.6	98.6
207	22764	1.7	17.4435	1.0	0.6234	2.6	0.0789	2.4	0.92	489.4	11.2	492.0	10.0	504.1	21.9	489.4	11.2	97.1
1076	51670	1.8	17.3475	0.9	0.6276	2.1	0.0790	1.8	0.89	489.9	8.7	494.6	8.1	516.3	20.4	489.9	8.7	94.9
560	17828	1.0	16.6743	1.2	0.6558	2.1	0.0793	1.7	0.81	492.0	7.9	512.1	8.3	602.6	25.9	492.0	7.9	81.7
1215	91630	2.2	17.5104	0.5	0.6248	1.3	0.0793	1.2	0.91	492.2	5.5	492.8	5.0	495.7	12.0	492.2	5.5	99.3
377	35628	1.3	17.2500	0.8	0.6346	2.1	0.0794	1.9	0.93	492.5	9.0	498.9	8.1	528.7	17.1	492.5	9.0	93.2
1391	28755	1.9	17.0814	0.6	0.6415	1.6	0.0795	1.5	0.93	493.0	7.2	503.3	6.4	550.2	12.6	493.0	7.2	89.6
471	251018	2.2	17.3782	1.0	0.6313	2.9	0.0796	2.8	0.94	493.6	13.1	496.9	11.5	512.4	21.8	493.6	13.1	96.3
384	24318	1.7	17.5530	1.0	0.6252	2.6	0.0796	2.4	0.91	493.7	11.2	493.1	10.1	490.4	23.0	493.7	11.2	100.7
162	63121	1.9	17.4937	0.9	0.6276	2.6	0.0796	2.5	0.95	493.9	11.9	494.6	10.3	497.8	18.9	493.9	11.9	99.2
834	54006	1.6	17.4803	0.8	0.6289	2.4	0.0797	2.2	0.95	494.5	10.7	495.4	9.3	499.5	16.7	494.5	10.7	99.0
935	82358	2.1	17.3897	0.8	0.6331	2.1	0.0799	2.0	0.93	495.2	9.5	498.0	8.4	511.0	17.9	495.2	9.5	96.9
765	76767	2.1	17.6156	0.5	0.6252	1.8	0.0799	1.7	0.96	495.4	8.3	493.1	7.1	482.5	11.9	495.4	8.3	102.7
492	50735	1.5	17.4492	0.7	0.6313	1.6	0.0799	1.5	0.90	495.5	7.0	496.9	6.4	503.5	15.8	495.5	7.0	98.4
355	236318	1.4	17.6825	0.8	0.6236	2.6	0.0800	2.5	0.95	496.0	11.8	492.1	10.1	474.2	17.6	496.0	11.8	104.6
748	316898	2.3	17.3158	0.6	0.6373	1.7	0.0800	1.6	0.93	496.4	7.6	500.7	6.8	520.3	14.1	496.4	7.6	95.4
523	229680	2.4	17.4501	0.7	0.6327	1.7	0.0801	1.5	0.91	496.6	7.2	497.8	6.5	503.4	15.1	496.6	7.2	98.7
507	124372	1.1	17.4429	0.6	0.6330	2.0	0.0801	1.9	0.95	496.6	9.3	498.0	8.0	504.3	14.1	496.6	9.3	98.5
794	106890	1.3	17.0278	0.7	0.6492	1.9	0.0802	1.8	0.94	497.2	8.6	508.0	7.7	557.0	14.8	497.2	8.6	89.3
457	46480	1.0	17.5335	0.9	0.6309	2.1	0.0802	1.9	0.90	497.5	8.9	496.7	8.1	492.8	19.4	497.5	8.9	100.9
582	30955	1.9	17.4839	0.6	0.6337	1.9	0.0804	1.8	0.95	498.2	8.6	498.4	7.4	499.1	12.8	498.2	8.6	99.8
299	70923	1.6	17.2569	1.1	0.6421	2.1	0.0804	1.8	0.86	498.3	8.8	503.6	8.5	527.8	23.7	498.3	8.8	94.4
616	50786	1.1	16.9096	1.0	0.6561	2.1	0.0805	1.9	0.89	498.9	9.1	512.2	8.6	572.2	21.3	498.9	9.1	87.2
600	72285	1.9	17.2731	0.9	0.6440	1.9	0.0807	1.7	0.90	500.2	8.4	504.8	7.7	525.7	19.0	500.2	8.4	95.1
265	15796	2.4	17.5699	0.9	0.6333	2.4	0.0807	2.2	0.93	500.3	10.6	498.2	9.3	488.3	19.3	500.3	10.6	102.5
225	828296	1.8	16.9486	0.9	0.6566	2.4	0.0807	2.2	0.93	500.4	10.7	512.6	9.6	567.2	19.2	500.4	10.7	88.2
220	1382472	1.3	17.2725	0.8	0.6445	2.5	0.0807	2.3	0.94	500.6	11.1	505.1	9.8	525.8	17.7	500.6	11.1	95.2
427	98365	3.3	17.6548	0.7	0.6306	2.1	0.0807	2.0	0.95	500.6	9.8	496.5	8.4	477.6	15.5	500.6	9.8	104.8
254	393238	1.2	17.3520	1.0	0.6425	2.5	0.0809	2.3	0.92	501.2	11.3	503.8	10.1	515.7	22.0	501.2	11.3	97.2
585	21498	1.7	17.3116	0.7	0.6442	2.4	0.0809	2.3	0.95	501.4	10.9	504.9	9.5	520.8	16.3	501.4	10.9	96.3
451	75554	1.7	17.0376	0.8	0.6557	1.7	0.0810	1.5	0.89	502.2	7.2	512.0	6.7	555.8	17.0	502.2	7.2	90.4
683	40838	2.6	16.9359	0.8	0.6617	2.1	0.0813	2.0	0.93	503.7	9.5	515.6	8.6	568.8	16.8	503.7	9.5	88.6
1754	61048	2.1	17.2815	0.6	0.6490	1.5	0.0813	1.4	0.93	504.2	6.9	507.9	6.1	524.7	12.6	504.2	6.9	96.1

274	191565	1.2	17.2307	1.0	0.6519	2.5	0.0815	2.4	0.93	504.9	11.4	509.6	10.2	531.1	20.8	504.9	11.4	95.1
155	30481	2.0	17.2588	1.1	0.6515	3.1	0.0815	2.9	0.94	505.3	14.2	509.4	12.5	527.6	24.1	505.3	14.2	95.8
715	174327	5.0	17.0695	0.7	0.6613	2.0	0.0819	1.8	0.93	507.3	8.9	515.4	7.9	551.7	15.7	507.3	8.9	92.0
331	156659	8.8	17.4619	0.7	0.6470	1.8	0.0819	1.7	0.92	507.7	8.2	506.6	7.3	501.9	16.1	507.7	8.2	101.2
680	42852	1.9	17.3634	0.8	0.6513	2.3	0.0820	2.1	0.94	508.1	10.4	509.3	9.1	514.3	17.5	508.1	10.4	98.8
225	37799	1.7	17.2874	1.0	0.6553	2.5	0.0822	2.3	0.91	509.0	11.1	511.8	10.0	523.9	22.5	509.0	11.1	97.2
490	61179	4.6	17.5547	0.8	0.6459	2.0	0.0822	1.8	0.92	509.5	9.0	506.0	7.9	490.2	16.9	509.5	9.0	103.9
248	27767	1.7	17.0957	0.9	0.6635	2.7	0.0823	2.5	0.94	509.6	12.3	516.7	10.9	548.3	20.6	509.6	12.3	92.9
1047	76198	1.6	16.7202	0.9	0.6784	1.6	0.0823	1.3	0.84	509.6	6.6	525.8	6.5	596.6	18.6	509.6	6.6	85.4
483	112131	2.9	17.2514	0.7	0.6575	1.9	0.0823	1.7	0.92	509.6	8.6	513.1	7.6	528.5	16.1	509.6	8.6	96.4
254	23160	1.5	17.1318	0.9	0.6624	1.9	0.0823	1.7	0.87	509.9	8.1	516.1	7.6	543.7	20.0	509.9	8.1	93.8
375	29919	100.7	17.1953	0.6	0.6603	1.8	0.0824	1.7	0.95	510.1	8.5	514.8	7.4	535.6	12.6	510.1	8.5	95.2
493	18109	1.7	16.7116	0.9	0.6797	2.1	0.0824	1.9	0.90	510.3	9.3	526.6	8.7	597.7	20.1	510.3	9.3	85.4
361	82210	1.5	16.8361	0.9	0.6752	2.0	0.0824	1.7	0.88	510.7	8.4	523.9	8.0	581.7	20.4	510.7	8.4	87.8
820	120358	2.9	17.2450	0.7	0.6611	1.8	0.0827	1.6	0.92	512.1	7.9	515.3	7.1	529.3	15.2	512.1	7.9	96.8
290	108539	4.1	16.8602	0.9	0.6779	2.4	0.0829	2.3	0.93	513.4	11.1	525.5	10.0	578.5	19.9	513.4	11.1	88.7
269	37494	6.9	17.2916	0.8	0.6611	2.1	0.0829	2.0	0.94	513.4	9.9	515.3	8.7	523.4	16.6	513.4	9.9	98.1
191	50080	2.3	17.1834	0.9	0.6663	3.2	0.0830	3.1	0.96	514.2	15.5	518.5	13.2	537.2	18.9	514.2	15.5	95.7
337	170182	3.2	17.1586	0.7	0.6674	2.0	0.0831	1.9	0.94	514.3	9.2	519.1	8.1	540.3	15.4	514.3	9.2	95.2
212	15184	2.0	17.3044	0.9	0.6622	1.9	0.0831	1.7	0.87	514.6	8.2	515.9	7.7	521.7	20.7	514.6	8.2	98.6
1458	16852	5.1	16.6167	0.8	0.6903	1.5	0.0832	1.2	0.84	515.2	6.0	533.0	6.0	610.0	17.3	515.2	6.0	84.4
458	63911	3.4	17.4188	0.5	0.6602	2.0	0.0834	1.9	0.97	516.4	9.4	514.7	7.9	507.3	10.9	516.4	9.4	101.8
340	20982	1.4	17.4402	1.0	0.6595	2.0	0.0834	1.8	0.87	516.5	8.7	514.3	8.1	504.6	21.9	516.5	8.7	102.4
375	64920	2.4	17.2510	0.9	0.6670	2.4	0.0835	2.2	0.92	516.7	10.8	518.9	9.6	528.6	19.6	516.7	10.8	97.8
170	111882	1.3	17.0640	0.8	0.6749	2.6	0.0835	2.5	0.95	517.1	12.2	523.7	10.6	552.4	18.3	517.1	12.2	93.6
255	145372	1.6	17.0931	0.9	0.6740	1.8	0.0836	1.6	0.87	517.3	7.7	523.2	7.3	548.7	19.2	517.3	7.7	94.3
503	41236	2.1	16.9633	0.7	0.6793	1.5	0.0836	1.4	0.88	517.4	6.7	526.4	6.3	565.3	15.7	517.4	6.7	91.5
243	20681	1.6	17.3126	0.9	0.6667	2.3	0.0837	2.1	0.91	518.2	10.4	518.7	9.3	520.7	20.6	518.2	10.4	99.5
284	11105	1.4	16.3891	0.9	0.7043	2.0	0.0837	1.8	0.88	518.3	8.9	541.3	8.5	639.8	20.3	518.3	8.9	81.0
303	86555	1.6	17.3269	0.9	0.6663	2.0	0.0837	1.7	0.89	518.3	8.7	518.4	7.9	518.9	19.3	518.3	8.7	99.9
262	115422	2.6	17.2677	0.8	0.6686	1.9	0.0837	1.7	0.91	518.4	8.5	519.9	7.6	526.4	16.8	518.4	8.5	98.5
190	36965	2.8	17.1124	1.0	0.6748	2.7	0.0838	2.5	0.93	518.5	12.3	523.6	10.9	546.2	22.0	518.5	12.3	94.9
143	46568	1.2	17.1814	1.1	0.6736	2.7	0.0839	2.5	0.92	519.6	12.4	522.9	11.0	537.4	23.3	519.6	12.4	96.7
301	19325	2.2	17.0814	1.0	0.6779	2.1	0.0840	1.9	0.88	519.8	9.4	525.5	8.8	550.2	22.4	519.8	9.4	94.5
264	74014	2.5	17.3821	1.1	0.6665	2.4	0.0840	2.2	0.90	520.1	10.9	518.6	9.9	511.9	23.5	520.1	10.9	101.6
295	98514	2.2	17.1847	0.8	0.6742	2.4	0.0840	2.2	0.94	520.1	11.0	523.2	9.6	537.0	17.8	520.1	11.0	96.9
389	379408	2.9	17.3927	0.9	0.6663	1.8	0.0841	1.6	0.87	520.3	7.8	518.5	7.2	510.6	19.0	520.3	7.8	101.9
134	47382	1.6	17.0941	1.0	0.6783	3.0	0.0841	2.8	0.95	520.5	14.1	525.7	12.2	548.5	21.1	520.5	14.1	94.9
224	71271	1.0	16.9144	0.9	0.6856	2.3	0.0841	2.1	0.93	520.6	10.5	530.2	9.4	571.5	18.7	520.6	10.5	91.1
346	74216	2.7	17.3713	0.8	0.6686	1.9	0.0842	1.7	0.90	521.4	8.5	519.9	7.7	513.3	17.8	521.4	8.5	101.6
57	64624	1.0	16.6765	2.0	0.6973	4.1	0.0843	3.6	0.88	522.0	17.8	537.2	16.9	602.3	42.4	522.0	17.8	86.7
836	97600	2.3	17.1728	0.7	0.6782	1.6	0.0845	1.5	0.91	522.7	7.4	525.7	6.7	538.5	14.8	522.7	7.4	97.1
92	11240	2.3	17.4392	1.5	0.6681	3.8	0.0845	3.5	0.92	523.0	17.5	519.6	15.4	504.7	33.4	523.0	17.5	103.6
218	24508	1.3	17.2541	1.0	0.6758	2.8	0.0846	2.6	0.93	523.4	13.1	524.3	11.5	528.2	22.8	523.4	13.1	99.1
248	32219	5.6	17.2973	0.9	0.6753	2.5	0.0847	2.4	0.93	524.2	11.9	523.9	10.4	522.6	20.6	524.2	11.9	100.3
267	42934	1.8	17.3355	0.8	0.6742	2.2	0.0848	2.1	0.94	524.5	10.7	523.3	9.2	517.8	16.7	524.5	10.7	101.3
173	12289	1.5	17.1115	0.8	0.6840	2.9	0.0849	2.8	0.96	525.2	13.9	529.2	11.9	546.3	17.8	525.2	13.9	96.1
143	320344	1.7	17.3566	1.0	0.6753	3.0	0.0850	2.9	0.95	526.0	14.4	524.0	12.3	515.1	21.2	526.0	14.4	102.1
330	24434	7.1	16.7330	0.8	0.7009	2.1	0.0851	2.0	0.92	526.2	10.0	539.3	9.0	595.0	18.0	526.2	10.0	88.4

227	72129	2.2	17.1777	0.9	0.6830	2.6	0.0851	2.4	0.93	526.4	12.2	528.6	10.6	537.9	20.2	526.4	12.2	97.9
277	560510	3.0	17.1099	0.9	0.6861	1.9	0.0851	1.7	0.90	526.7	8.7	530.5	7.9	546.5	18.7	526.7	8.7	96.4
239	21497	0.8	16.9269	0.9	0.6935	2.2	0.0851	2.1	0.92	526.8	10.5	534.9	9.3	570.0	18.6	526.8	10.5	92.4
603	130068	2.0	17.2055	0.9	0.6826	1.9	0.0852	1.7	0.88	526.9	8.4	528.3	7.8	534.3	19.8	526.9	8.4	98.6
793	29430	4.5	16.7099	0.6	0.7029	1.7	0.0852	1.6	0.93	527.0	8.0	540.5	7.2	598.0	14.0	527.0	8.0	88.1
654	143758	0.9	17.2518	0.6	0.6809	1.7	0.0852	1.6	0.92	527.1	8.0	527.3	7.0	528.5	14.2	527.1	8.0	99.7
249	9832	1.8	16.3312	1.0	0.7196	2.4	0.0852	2.2	0.91	527.3	11.0	550.4	10.1	647.4	20.7	527.3	11.0	81.4
539	26359	1.0	17.2709	0.7	0.6811	1.4	0.0853	1.2	0.86	527.8	5.9	527.5	5.6	526.0	15.4	527.8	5.9	100.3
207	154089	2.7	17.3992	0.8	0.6787	2.9	0.0856	2.7	0.96	529.7	13.9	526.0	11.7	509.8	18.5	529.7	13.9	103.9
488	164697	8.8	17.0106	0.8	0.6957	1.5	0.0858	1.3	0.87	530.8	6.8	536.2	6.4	559.2	16.7	530.8	6.8	94.9
428	33471	2.3	17.2700	0.8	0.6880	2.1	0.0862	1.9	0.92	532.9	9.8	531.6	8.7	526.1	18.1	532.9	9.8	101.3
511	105758	15.0	17.0954	0.8	0.6951	2.1	0.0862	1.9	0.93	532.9	9.9	535.9	8.7	548.4	16.9	532.9	9.9	97.2
1074	16513	0.8	16.3345	0.7	0.7277	1.3	0.0862	1.1	0.84	533.1	5.5	555.2	5.5	647.0	14.9	533.1	5.5	82.4
397	18807	2.5	17.2303	0.8	0.6907	1.6	0.0863	1.4	0.88	533.7	7.3	533.2	6.7	531.2	16.9	533.7	7.3	100.5
516	58710	1.0	17.3223	0.7	0.6880	1.6	0.0864	1.5	0.90	534.4	7.5	531.6	6.8	519.5	15.6	534.4	7.5	102.9
364	555477	2.2	17.3410	1.0	0.6874	2.3	0.0865	2.1	0.90	534.5	10.6	531.2	9.5	517.1	21.6	534.5	10.6	103.4
527	68289	2.4	17.0795	0.6	0.6991	1.9	0.0866	1.8	0.95	535.4	9.2	538.2	7.9	550.4	12.9	535.4	9.2	97.3
597	65920	0.9	17.0657	0.8	0.7003	2.0	0.0867	1.9	0.93	535.9	9.7	539.0	8.5	552.1	16.4	535.9	9.7	97.1
168	13245	25.7	17.2767	1.2	0.6953	2.4	0.0871	2.1	0.88	538.5	11.1	536.0	10.2	525.3	25.4	538.5	11.1	102.5
785	171569	3.1	17.2716	0.7	0.6960	2.3	0.0872	2.2	0.96	538.9	11.1	536.4	9.4	525.9	14.5	538.9	11.1	102.5
473	574723	3.6	16.8962	0.9	0.7153	2.1	0.0877	1.9	0.91	541.6	9.9	547.9	8.9	573.9	18.7	541.6	9.9	94.4
1225	33246	4.3	16.8292	0.7	0.7183	2.6	0.0877	2.5	0.96	541.7	12.9	549.6	11.0	582.5	16.2	541.7	12.9	93.0
528	81289	9.1	17.0842	0.7	0.7080	2.0	0.0877	1.8	0.93	542.1	9.5	543.5	8.3	549.8	15.7	542.1	9.5	98.6
139	25665	2.0	16.4452	1.0	0.7362	2.6	0.0878	2.4	0.93	542.6	12.5	560.2	11.2	632.5	21.0	542.6	12.5	85.8
354	214422	1.6	17.2110	0.9	0.7041	2.4	0.0879	2.3	0.93	543.1	11.9	541.3	10.3	533.6	19.3	543.1	11.9	101.8
453	61948	1.7	17.1290	0.9	0.7104	2.2	0.0883	2.0	0.91	545.2	10.3	545.0	9.2	544.1	20.2	545.2	10.3	100.2
167	14160	2.9	16.8454	1.2	0.7230	2.6	0.0883	2.4	0.90	545.7	12.3	552.4	11.2	580.4	25.1	545.7	12.3	94.0
546	71660	3.7	17.1049	0.7	0.7121	1.8	0.0883	1.6	0.91	545.7	8.4	546.0	7.4	547.1	15.8	545.7	8.4	99.7
1235	290034	28.2	16.6662	0.5	0.7316	1.5	0.0884	1.4	0.95	546.2	7.6	557.5	6.6	603.6	10.5	546.2	7.6	90.5
425	90336	2.9	17.0467	0.9	0.7167	2.2	0.0886	2.0	0.92	547.3	10.5	548.7	9.2	554.6	18.7	547.3	10.5	98.7
698	266902	7.8	16.9601	0.7	0.7205	1.6	0.0886	1.5	0.90	547.4	7.6	550.9	6.9	565.7	15.5	547.4	7.6	96.8
1139	139621	6.8	16.7748	0.7	0.7295	1.7	0.0888	1.6	0.92	548.2	8.2	556.3	7.3	589.6	14.2	548.2	8.2	93.0
148	61067	2.5	16.5955	1.2	0.7401	2.6	0.0891	2.3	0.89	550.1	12.1	562.5	11.2	612.8	26.1	550.1	12.1	89.8
483	574951	5.7	16.8489	0.7	0.7302	1.9	0.0892	1.8	0.94	551.0	9.6	556.7	8.3	580.0	14.9	551.0	9.6	95.0
267	16685	1.2	17.0827	0.9	0.7210	2.4	0.0893	2.2	0.93	551.5	11.8	551.2	10.2	550.0	19.3	551.5	11.8	100.3
356	86509	1.2	16.8952	0.9	0.7317	1.9	0.0897	1.7	0.90	553.5	9.2	557.5	8.3	574.0	18.6	553.5	9.2	96.4
101	214634	0.7	16.4959	1.3	0.7512	3.6	0.0899	3.4	0.93	554.8	17.8	568.9	15.7	625.8	28.0	554.8	17.8	88.7
313	97040	1.1	16.6873	0.7	0.7445	2.3	0.0901	2.2	0.96	556.1	12.0	565.0	10.2	600.9	14.8	556.1	12.0	92.6
659	1391296	1.2	16.7402	0.7	0.7480	2.1	0.0908	2.0	0.94	560.3	10.5	567.0	9.0	594.0	15.0	560.3	10.5	94.3
51	13045	208.0	16.6512	1.5	0.7575	4.5	0.0915	4.2	0.94	564.3	22.8	572.6	19.6	605.6	32.7	564.3	22.8	93.2
370	1339069	2.8	16.4261	1.1	0.7693	2.3	0.0916	2.0	0.88	565.3	11.0	579.3	10.2	635.0	23.5	565.3	11.0	89.0
479	385511	3.4	16.8950	0.8	0.7489	2.1	0.0918	1.9	0.92	566.0	10.5	567.6	9.1	574.1	17.6	566.0	10.5	98.6
151	273257	5.2	16.7642	1.0	0.7553	3.4	0.0918	3.2	0.96	566.3	17.5	571.3	14.7	590.9	20.9	566.3	17.5	95.8
503	97284	7.6	16.8672	0.8	0.7523	1.7	0.0920	1.5	0.88	567.5	8.2	569.6	7.5	577.6	17.5	567.5	8.2	98.2
287	41773	119.6	16.8546	0.7	0.7551	2.7	0.0923	2.6	0.96	569.1	14.1	571.2	11.7	579.3	15.8	569.1	14.1	98.2
482	196000	1.1	16.7047	0.8	0.7637	2.2	0.0925	2.0	0.94	570.5	11.0	576.2	9.5	598.7	16.5	570.5	11.0	95.3
974	156175	10.4	16.7970	0.6	0.7625	1.6	0.0929	1.5	0.93	572.6	8.1	575.5	6.9	586.7	12.3	572.6	8.1	97.6
143	1122402	2.6	16.7848	1.0	0.7686	2.7	0.0936	2.5	0.93	576.6	14.0	579.0	12.1	588.3	21.7	576.6	14.0	98.0
495	92693	4.1	16.6682	1.0	0.7838	2.3	0.0948	2.1	0.91	583.6	11.6	587.7	10.2	603.4	20.8	583.6	11.6	96.7

474	43647	6.7	16.2462	0.8	0.8049	1.6	0.0948	1.4	0.88	584.1	8.0	599.6	7.4	658.6	16.3	584.1	8.0	88.7
739	244250	8.3	16.5145	0.9	0.7937	2.4	0.0951	2.2	0.92	585.4	12.4	593.3	10.8	623.4	19.9	585.4	12.4	93.9
245	72050	2.0	16.8694	1.1	0.7836	2.3	0.0959	2.0	0.87	590.1	11.2	587.5	10.2	577.4	24.7	590.1	11.2	102.2
157	135913	18.1	16.6914	1.1	0.7935	2.5	0.0961	2.2	0.89	591.2	12.5	593.1	11.1	600.3	24.3	591.2	12.5	98.5
274	34506	2.4	16.4627	0.8	0.8232	2.1	0.0983	1.9	0.93	604.4	11.0	609.8	9.4	630.2	16.7	604.4	11.0	95.9
1330	650020	138.8	16.1476	1.1	0.8419	3.3	0.0986	3.1	0.94	606.2	18.0	620.2	15.3	671.7	23.5	606.2	18.0	90.3
296	29023	14.1	16.4091	1.1	0.8334	2.1	0.0992	1.8	0.85	609.6	10.3	615.5	9.6	637.2	23.9	609.6	10.3	95.7
1000	1083041	8.4	16.6094	0.8	0.8247	1.9	0.0993	1.8	0.92	610.6	10.4	610.7	8.9	611.0	16.4	610.6	10.4	99.9
429	64033	11.5	16.5952	1.1	0.8325	2.3	0.1002	2.0	0.88	615.6	12.0	615.0	10.6	612.9	23.2	615.6	12.0	100.4
149	11098	2.4	15.5068	2.2	0.8913	3.2	0.1002	2.3	0.72	615.9	13.4	647.1	15.3	757.7	47.0	615.9	13.4	81.3
588	176408	2.2	16.6384	0.6	0.8328	1.4	0.1005	1.3	0.90	617.3	7.6	615.2	6.7	607.2	13.6	617.3	7.6	101.7
1064	260624	7.2	16.4930	0.7	0.8637	1.7	0.1033	1.6	0.91	633.8	9.4	632.1	8.0	626.2	14.9	633.8	9.4	101.2
222	17091	2.5	16.3584	0.9	0.8743	2.5	0.1037	2.4	0.93	636.2	14.3	637.9	12.1	643.9	20.2	636.2	14.3	98.8
551	39652	3.3	15.9340	0.7	0.9041	1.9	0.1045	1.7	0.93	640.6	10.6	653.9	9.0	700.0	15.1	640.6	10.6	91.5
185	324702	1.8	16.2350	0.9	0.8976	3.5	0.1057	3.3	0.96	647.6	20.6	650.4	16.6	660.1	20.0	647.6	20.6	98.1
430	172331	2.4	15.9978	0.8	0.9184	2.7	0.1066	2.5	0.96	652.7	15.8	661.5	12.9	691.5	16.4	652.7	15.8	94.4
697	1675378	3.6	16.3687	0.5	0.8984	1.6	0.1067	1.5	0.94	653.3	9.1	650.9	7.5	642.5	11.3	653.3	9.1	101.7
662	134190	3.4	16.3060	0.8	0.9085	2.0	0.1074	1.9	0.93	657.8	11.6	656.2	9.7	650.7	16.1	657.8	11.6	101.1
1002	498550	14.2	16.1824	0.5	0.9163	1.7	0.1075	1.6	0.95	658.4	10.2	660.4	8.3	667.0	11.3	658.4	10.2	98.7
234	21367	10.6	16.3884	0.6	0.9077	1.8	0.1079	1.7	0.94	660.5	10.8	655.8	8.9	639.9	13.3	660.5	10.8	103.2
107	48494	1.6	15.5558	1.0	0.9592	3.7	0.1082	3.6	0.97	662.4	22.7	682.9	18.6	751.0	20.4	662.4	22.7	88.2
267	41331	2.2	16.2459	0.9	0.9201	2.2	0.1084	2.0	0.92	663.5	12.7	662.4	10.7	658.6	18.3	663.5	12.7	100.7
1144	148565	2.4	16.2400	0.6	0.9224	1.9	0.1086	1.8	0.95	664.8	11.2	663.6	9.1	659.4	11.8	664.8	11.2	100.8
352	56569	3.4	15.6745	1.2	0.9566	2.5	0.1087	2.2	0.89	665.5	14.1	681.5	12.5	735.0	24.4	665.5	14.1	90.5
1598	87758	37.1	15.7772	0.8	0.9771	1.9	0.1118	1.7	0.91	683.2	11.3	692.1	9.6	721.1	16.9	683.2	11.3	94.7
647	6954386	4.1	16.1019	0.4	0.9576	1.7	0.1118	1.7	0.97	683.4	10.8	682.0	8.5	677.7	9.2	683.4	10.8	100.8
1289	27945	19.8	15.1678	1.0	1.0348	2.7	0.1138	2.5	0.93	695.0	16.5	721.3	13.9	804.1	20.8	695.0	16.5	86.4
617	312227	7.0	15.1107	0.8	1.0446	2.5	0.1145	2.3	0.94	698.7	15.4	726.2	12.8	812.0	17.5	698.7	15.4	86.0
105	35600	1.0	14.8933	0.9	1.0822	3.0	0.1169	2.9	0.95	712.7	19.3	744.7	15.8	842.3	18.7	712.7	19.3	84.6
185	79794	2.6	15.0240	1.1	1.0860	3.0	0.1183	2.8	0.93	721.0	19.2	746.6	15.9	824.1	22.5	721.0	19.2	87.5
1384	80904	7.3	14.7177	0.6	1.1133	1.8	0.1188	1.7	0.95	723.9	11.9	759.8	9.8	866.9	11.5	723.9	11.9	83.5
269	23984	2.9	15.0094	0.7	1.0966	2.2	0.1194	2.1	0.95	726.9	14.7	751.7	11.9	826.1	14.9	726.9	14.7	88.0
1081	201313	0.8	15.6065	0.6	1.0748	1.5	0.1217	1.4	0.93	740.1	10.1	741.1	8.2	744.1	11.8	740.1	10.1	99.5
194	67377	2.0	15.3400	0.7	1.1141	2.1	0.1240	1.9	0.93	753.3	13.7	760.1	11.1	780.4	15.6	753.3	13.7	96.5
601	2003213	16.1	14.9382	0.6	1.1524	1.7	0.1248	1.6	0.93	758.4	11.4	778.4	9.3	836.0	12.6	758.4	11.4	90.7
634	103622	4.9	15.3407	0.7	1.1284	2.1	0.1255	2.0	0.95	762.4	14.5	767.0	11.5	780.3	14.3	762.4	14.5	97.7
1212	152152	4.1	15.1637	0.6	1.1518	1.9	0.1267	1.8	0.94	768.9	12.9	778.1	10.3	804.7	13.2	768.9	12.9	95.5
414	60106	2.7	15.3599	0.6	1.1374	2.1	0.1267	2.0	0.95	769.1	14.3	771.3	11.2	777.7	13.0	769.1	14.3	98.9
626	128544	2.2	15.4335	0.6	1.1470	1.4	0.1284	1.3	0.92	778.6	9.6	775.8	7.8	767.6	12.0	778.6	9.6	101.4
1324	191947	3.9	14.1121	0.7	1.3030	2.0	0.1334	1.9	0.94	807.0	14.3	847.0	11.5	953.4	13.9	807.0	14.3	84.6
496	129807	1.6	15.2181	0.7	1.2244	2.4	0.1351	2.3	0.95	817.1	17.6	811.8	13.5	797.2	15.3	817.1	17.6	102.5
2660	18085	13.6	14.5380	1.1	1.2934	3.0	0.1364	2.8	0.93	824.2	21.4	842.8	17.0	892.3	22.0	824.2	21.4	92.4
465	58090	10.9	14.1551	0.5	1.3287	2.0	0.1364	2.0	0.97	824.3	15.3	858.3	11.8	947.2	9.9	824.3	15.3	87.0
310	108185	5.3	14.3157	0.5	1.3600	2.2	0.1412	2.1	0.97	851.5	16.7	871.9	12.6	924.1	11.0	851.5	16.7	92.1
360	44540	2.2	14.7071	1.1	1.3577	3.0	0.1448	2.8	0.93	871.9	23.0	870.9	17.8	868.4	23.5	871.9	23.0	100.4
277	374760	3.8	14.2439	0.6	1.4195	2.5	0.1466	2.4	0.97	882.1	20.1	897.2	15.0	934.4	12.7	934.4	12.7	94.4
187	58480	2.0	14.1960	1.0	1.3904	3.0	0.1432	2.8	0.94	862.5	22.6	884.9	17.5	941.3	20.2	941.3	20.2	91.6
1096	1621950	3.6	14.0901	0.7	1.4069	3.9	0.1438	3.9	0.98	866.0	31.3	891.9	23.3	956.6	14.5	956.6	14.5	90.5
177	18192	3.1	14.0753	0.8	1.4746	2.6	0.1505	2.4	0.95	904.0	20.6	920.0	15.5	958.7	16.1	958.7	16.1	94.3

410	202793	6.3	14.0751	0.9	1.3841	3.8	0.1413	3.7	0.97	851.9	29.5	882.2	22.4	958.8	18.6	958.8	18.6	88.9
404	404242	1.9	14.0620	0.7	1.3944	2.2	0.1422	2.1	0.95	857.1	16.9	886.6	13.1	960.7	14.5	960.7	14.5	89.2
190	231940	4.3	14.0600	0.9	1.4123	3.1	0.1440	3.0	0.96	867.3	24.4	894.1	18.6	961.0	18.1	961.0	18.1	90.3
327	35624	0.7	14.0187	0.7	1.4615	1.8	0.1486	1.7	0.93	893.1	13.9	914.6	10.8	967.0	13.5	967.0	13.5	92.4
202	34733	1.9	14.0098	0.9	1.5049	2.4	0.1529	2.2	0.92	917.3	19.2	932.4	14.8	968.3	18.9	968.3	18.9	94.7
1071	188607	10.4	14.0073	0.5	1.3892	2.0	0.1411	2.0	0.97	851.0	15.7	884.3	12.0	968.6	10.4	968.6	10.4	87.9
692	279592	3.4	13.8097	0.7	1.5874	3.3	0.1590	3.2	0.98	951.2	28.5	965.3	20.5	997.5	14.2	997.5	14.2	95.4
630	48267	50.7	13.7983	0.6	1.4980	2.3	0.1499	2.2	0.96	900.5	18.4	929.6	13.8	999.2	12.1	999.2	12.1	90.1
90	45581	1.6	13.7972	1.0	1.4883	3.4	0.1489	3.3	0.96	894.9	27.2	925.6	20.7	999.4	20.5	999.4	20.5	89.5
187	124358	2.1	13.7673	0.9	1.6934	3.1	0.1691	2.9	0.96	1007.1	27.3	1006.0	19.5	1003.8	18.1	1003.8	18.1	100.3
348	258396	3.1	13.7370	0.9	1.7481	2.9	0.1742	2.8	0.95	1035.0	26.4	1026.5	18.8	1008.3	18.1	1008.3	18.1	102.7
283	13483	11.5	13.7248	1.4	1.4929	2.7	0.1486	2.4	0.86	893.2	19.7	927.5	16.6	1010.1	28.0	1010.1	28.0	88.4
486	465157	2.0	13.7013	0.6	1.7001	1.9	0.1689	1.8	0.95	1006.3	16.4	1008.6	11.9	1013.5	12.1	1013.5	12.1	99.3
415	84054	2.2	13.6400	0.6	1.6972	2.2	0.1679	2.2	0.97	1000.5	19.9	1007.5	14.2	1022.6	11.5	1022.6	11.5	97.8
214	104208	1.5	13.6291	1.0	1.5755	3.5	0.1557	3.4	0.96	933.0	29.3	960.6	21.8	1024.2	19.4	1024.2	19.4	91.1
857	104479	2.7	13.6291	0.8	1.5649	2.2	0.1547	2.0	0.93	927.2	17.6	956.4	13.6	1024.2	16.7	1024.2	16.7	90.5
199	74703	1.7	13.6158	0.6	1.7575	2.0	0.1736	1.9	0.95	1031.7	17.9	1029.9	12.8	1026.2	12.8	1026.2	12.8	100.5
305	37980	5.4	13.5982	0.7	1.7664	2.0	0.1742	1.9	0.94	1035.3	18.2	1033.2	13.1	1028.8	13.5	1028.8	13.5	100.6
136	45958	1.4	13.5916	0.8	1.8132	2.9	0.1787	2.8	0.96	1060.1	27.4	1050.2	19.0	1029.8	15.7	1029.8	15.7	102.9
236	39189	1.5	13.5756	0.7	1.8030	2.1	0.1775	1.9	0.94	1053.4	18.8	1046.6	13.5	1032.2	14.5	1032.2	14.5	102.1
996	1693360	1.5	13.5677	0.7	1.6702	1.8	0.1644	1.7	0.93	980.9	15.6	997.3	11.7	1033.4	13.3	1033.4	13.3	94.9
53	266418	1.8	13.5670	1.1	1.6912	4.9	0.1664	4.8	0.98	992.3	43.9	1005.2	31.2	1033.5	21.8	1033.5	21.8	96.0
312	56595	2.9	13.5524	0.6	1.7487	2.0	0.1719	1.9	0.96	1022.5	17.9	1026.7	12.8	1035.6	11.4	1035.6	11.4	98.7
291	29285	3.5	13.5499	0.8	1.7237	2.4	0.1694	2.2	0.94	1008.8	20.6	1017.4	15.1	1036.0	16.2	1036.0	16.2	97.4
473	2528176	4.9	13.4993	0.6	1.7313	1.9	0.1695	1.9	0.96	1009.4	17.3	1020.2	12.5	1043.6	11.2	1043.6	11.2	96.7
236	48260	1.9	13.4870	0.7	1.7429	2.1	0.1705	2.0	0.95	1014.8	18.6	1024.5	13.5	1045.4	13.7	1045.4	13.7	97.1
262	195137	2.0	13.4833	0.7	1.7694	2.3	0.1730	2.2	0.96	1028.8	20.9	1034.3	14.9	1046.0	13.5	1046.0	13.5	98.4
454	269462	2.2	13.4833	0.7	1.7891	1.9	0.1750	1.8	0.94	1039.4	17.3	1041.5	12.5	1046.0	13.7	1046.0	13.7	99.4
326	35288	2.9	13.4825	0.7	1.7091	2.6	0.1671	2.5	0.96	996.2	22.8	1011.9	16.4	1046.1	13.6	1046.1	13.6	95.2
186	36704	5.3	13.4668	0.7	1.8049	2.8	0.1763	2.7	0.96	1046.7	25.7	1047.2	18.1	1048.5	15.0	1048.5	15.0	99.8
39	21750	1.4	13.4326	1.1	1.8297	4.8	0.1783	4.6	0.97	1057.4	45.2	1056.2	31.4	1053.6	23.2	1053.6	23.2	100.4
142	43276	2.1	13.3719	0.8	1.9135	2.5	0.1856	2.4	0.95	1097.4	23.8	1085.8	16.6	1062.7	16.0	1062.7	16.0	103.3
465	173394	6.4	13.3590	0.7	1.8534	1.8	0.1796	1.7	0.93	1064.6	16.6	1064.6	12.0	1064.6	13.4	1064.6	13.4	100.0
851	117645	2.3	13.3164	0.6	1.7419	2.0	0.1682	1.9	0.95	1002.4	17.7	1024.2	12.9	1071.1	12.6	1071.1	12.6	93.6
771	147013	9.1	13.3079	0.5	1.8890	1.7	0.1823	1.6	0.95	1079.7	15.6	1077.2	11.0	1072.4	10.8	1072.4	10.8	100.7
181	28106	3.6	13.2568	0.9	1.8789	1.7	0.1807	1.4	0.86	1070.5	14.3	1073.7	11.1	1080.0	17.1	1080.0	17.1	99.1
367	12717	11.1	13.2561	1.3	1.6519	2.2	0.1588	1.8	0.81	950.2	15.6	990.3	13.9	1080.1	26.1	1080.1	26.1	88.0
155	66249	2.5	13.2540	0.8	1.8297	2.5	0.1759	2.3	0.95	1044.5	22.4	1056.2	16.1	1080.5	15.7	1080.5	15.7	96.7
45	5322	2.9	13.2528	1.4	1.8984	4.2	0.1825	4.0	0.95	1080.5	39.3	1080.5	27.8	1080.7	27.2	1080.7	27.2	100.0
458	71562	1.8	13.2483	0.5	1.8983	1.8	0.1824	1.7	0.95	1080.1	16.7	1080.5	11.8	1081.3	10.8	1081.3	10.8	99.9
251	69106	1.9	13.2424	0.6	1.8922	1.9	0.1817	1.8	0.94	1076.4	17.5	1078.4	12.4	1082.3	12.7	1082.3	12.7	99.5
189	139046	1.5	13.1853	0.7	1.9347	2.2	0.1850	2.1	0.95	1094.3	21.5	1093.2	15.1	1090.9	14.0	1090.9	14.0	100.3
924	40235	2.0	13.1739	0.5	1.7538	1.5	0.1676	1.4	0.95	998.7	12.9	1028.6	9.5	1092.6	9.5	1092.6	9.5	91.4
688	97150	0.9	12.9895	0.6	1.9783	1.6	0.1864	1.5	0.94	1101.7	15.5	1108.1	11.1	1120.8	11.6	1120.8	11.6	98.3
53	10866	2.1	12.9529	1.2	1.8670	4.6	0.1754	4.5	0.97	1041.8	43.2	1069.5	30.7	1126.4	23.5	1126.4	23.5	92.5
143	21811	1.8	12.8235	1.0	1.7343	3.4	0.1613	3.3	0.96	964.0	29.6	1021.3	22.2	1146.4	19.2	1146.4	19.2	84.1
97	68978	1.1	12.8012	0.6	2.0050	3.0	0.1861	2.9	0.98	1100.5	29.5	1117.2	20.2	1149.9	12.4	1149.9	12.4	95.7
894	1340108	15.7	12.5948	0.8	1.9053	2.3	0.1740	2.1	0.93	1034.4	20.3	1083.0	15.2	1182.1	16.4	1182.1	16.4	87.5
402	86700	2.8	12.4255	0.6	2.2537	1.7	0.2031	1.6	0.94	1191.9	17.0	1197.9	11.7	1208.8	11.1	1208.8	11.1	98.6

255	7625	2.1	12.3841	1.0	1.9467	2.2	0.1749	2.0	0.90	1038.8	18.7	1097.3	14.6	1215.4	19.1	1215.4	19.1	85.5
187	36508	1.8	12.1678	0.7	2.4707	2.7	0.2180	2.6	0.96	1271.5	30.2	1263.5	19.6	1249.9	14.3	1249.9	14.3	101.7
93	38965	1.5	11.6461	0.8	2.6243	3.5	0.2217	3.4	0.98	1290.7	40.3	1307.5	26.0	1335.1	14.9	1335.1	14.9	96.7
236	136542	1.5	11.1811	0.9	2.9790	2.1	0.2416	1.9	0.91	1394.9	23.8	1402.3	15.9	1413.5	16.6	1413.5	16.6	98.7
149	49658	2.1	11.1704	0.8	3.0596	2.7	0.2479	2.6	0.95	1427.5	33.0	1422.6	20.7	1415.3	15.9	1415.3	15.9	100.9
373	329632	1.1	11.0952	0.6	2.9396	2.2	0.2365	2.1	0.96	1368.7	25.7	1392.2	16.4	1428.3	11.0	1428.3	11.0	95.8
807	405243	5.1	11.0858	0.6	2.9287	2.5	0.2355	2.5	0.97	1363.1	30.1	1389.4	19.2	1429.9	12.0	1429.9	12.0	95.3
43	11178	0.8	11.0534	1.0	2.9596	4.5	0.2373	4.4	0.98	1372.5	54.5	1397.3	34.3	1435.4	18.6	1435.4	18.6	95.6
94	224913	0.8	10.8922	0.7	3.0756	3.2	0.2430	3.2	0.98	1402.1	39.7	1426.6	24.7	1463.4	12.9	1463.4	12.9	95.8
76	6399	1.1	10.1024	1.3	3.1767	3.3	0.2328	3.0	0.91	1348.9	36.6	1451.5	25.4	1605.1	24.7	1605.1	24.7	84.0
481	91821	2.1	9.7460	0.7	3.9209	1.8	0.2771	1.7	0.93	1577.0	23.4	1618.0	14.6	1671.8	12.2	1671.8	12.2	94.3
887	304902	45.1	9.2500	0.5	4.7000	1.7	0.3153	1.7	0.96	1766.8	25.8	1767.2	14.6	1767.8	9.4	1767.8	9.4	99.9
267	68687	4.6	9.1775	0.5	4.8550	1.9	0.3232	1.9	0.96	1805.1	29.5	1794.5	16.4	1782.1	9.4	1782.1	9.4	101.3
429	897141	3.0	8.9934	0.6	4.8572	1.9	0.3168	1.8	0.95	1774.2	28.0	1794.9	16.0	1819.0	10.8	1819.0	10.8	97.5
443	93552	1.4	8.9341	0.7	4.7132	2.6	0.3054	2.5	0.97	1718.0	38.4	1769.6	22.1	1831.0	12.2	1831.0	12.2	93.8
390	1250569	4.6	7.1731	0.8	7.8329	1.9	0.4075	1.8	0.92	2203.5	33.1	2212.0	17.5	2219.9	13.5	2219.9	13.5	99.3
528	1234283	2.7	6.4647	0.6	8.6130	2.2	0.4038	2.1	0.96	2186.7	39.7	2297.9	20.3	2398.4	11.0	2398.4	11.0	91.2
361	893373	1.6	6.3187	0.6	9.8317	1.7	0.4506	1.6	0.94	2397.8	31.2	2419.1	15.2	2437.1	9.4	2437.1	9.4	98.4
530	503230	4.7	6.2883	0.5	10.1155	1.5	0.4613	1.4	0.93	2445.5	27.7	2445.4	13.5	2445.3	8.8	2445.3	8.8	100.0
174	66384	2.4	6.1221	0.6	10.3099	2.5	0.4578	2.4	0.97	2429.7	48.7	2463.0	23.0	2490.6	10.7	2490.6	10.7	97.6
202	186193	7.5	4.9306	4.8	14.6403	8.0	0.5235	6.4	0.80	2714.2	141.1	2792.2	76.0	2849.0	78.3	2849.0	78.3	95.3
345	418356	1.7	4.2587	0.5	19.9935	2.0	0.6175	2.0	0.97	3100.1	48.4	3091.0	19.6	3085.1	8.1	3085.1	8.1	100.5

YAR4C Sandstone

U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
4693	964	12.7	8.8921	0.7	0.7675	1.8	0.0495	1.7	0.93	311.4	5.2	578.3	8.1	1839.5	12.2	311.4	5.2	NA
295	27296	2.0	17.2859	0.9	0.6238	3.5	0.0782	3.3	0.96	485.4	15.6	492.2	13.5	524.1	20.8	485.4	15.6	92.6
248	33331	1.7	17.3122	1.0	0.6253	2.6	0.0785	2.4	0.92	487.2	11.2	493.2	10.2	520.8	22.3	487.2	11.2	93.6
385	22204	1.6	17.3090	1.0	0.6269	3.4	0.0787	3.2	0.95	488.3	15.1	494.2	13.2	521.2	23.0	488.3	15.1	93.7
183	10570	2.0	16.9943	1.2	0.6398	3.3	0.0789	3.0	0.93	489.3	14.3	502.2	12.9	561.3	26.6	489.3	14.3	87.2
398	38515	2.4	17.2999	1.1	0.6297	2.7	0.0790	2.5	0.91	490.2	11.6	495.9	10.6	522.3	24.2	490.2	11.6	93.9
300	203643	2.2	17.3454	1.2	0.6290	3.0	0.0791	2.8	0.92	490.9	13.1	495.5	11.8	516.5	25.3	490.9	13.1	95.0
270	75021	2.1	17.5687	1.0	0.6211	2.9	0.0791	2.8	0.94	491.0	13.0	490.6	11.4	488.4	22.2	491.0	13.0	100.5
432	54252	2.1	17.3825	0.9	0.6282	3.0	0.0792	2.8	0.95	491.3	13.4	495.0	11.6	511.9	20.2	491.3	13.4	96.0
318	62404	2.0	17.2597	1.1	0.6332	2.5	0.0793	2.2	0.89	491.8	10.3	498.1	9.7	527.5	25.0	491.8	10.3	93.2
1467	492009	1.2	17.4853	0.9	0.6255	2.4	0.0793	2.2	0.92	492.1	10.3	493.3	9.3	498.9	20.5	492.1	10.3	98.6
869	173386	3.4	17.3566	0.8	0.6304	2.3	0.0794	2.2	0.94	492.3	10.4	496.3	9.1	515.1	16.7	492.3	10.4	95.6
297	55998	1.5	17.1691	1.2	0.6381	3.2	0.0795	3.0	0.92	492.8	14.0	501.1	12.7	538.9	26.9	492.8	14.0	91.4
433	49682	1.8	17.3763	0.9	0.6307	2.7	0.0795	2.6	0.94	493.0	12.3	496.5	10.8	512.6	20.3	493.0	12.3	96.2
285	46086	1.6	17.4025	1.1	0.6299	3.1	0.0795	2.9	0.94	493.1	13.9	496.0	12.3	509.3	23.9	493.1	13.9	96.8
295	127226	2.5	17.1065	1.0	0.6439	2.8	0.0799	2.6	0.93	495.5	12.4	504.7	11.0	546.9	21.7	495.5	12.4	90.6
896	132463	1.8	17.1396	0.8	0.6430	2.6	0.0799	2.5	0.96	495.7	11.7	504.1	10.2	542.7	16.4	495.7	11.7	91.3
842	40283	1.3	17.5512	0.7	0.6286	2.4	0.0800	2.3	0.96	496.2	10.9	495.2	9.4	490.6	15.4	496.2	10.9	101.1
469	66287	2.2	17.4056	1.0	0.6340	2.7	0.0800	2.6	0.93	496.4	12.2	498.6	10.8	509.0	21.6	496.4	12.2	97.5
475	51426	2.9	17.6879	0.9	0.6240	2.4	0.0801	2.2	0.92	496.4	10.4	492.4	9.2	473.5	20.0	496.4	10.4	104.9
270	87851	2.0	17.2914	0.9	0.6386	3.0	0.0801	2.9	0.95	496.6	13.8	501.4	12.0	523.4	19.9	496.6	13.8	94.9
568	588920	1.5	17.2200	0.9	0.6419	2.3	0.0802	2.2	0.93	497.1	10.4	503.5	9.3	532.5	19.1	497.1	10.4	93.4
184	23843	2.2	17.4960	1.1	0.6336	3.4	0.0804	3.2	0.94	498.5	15.2	498.3	13.3	497.6	25.0	498.5	15.2	100.2
448	112767	2.8	16.9489	0.8	0.6543	2.6	0.0804	2.4	0.95	498.7	11.7	511.1	10.3	567.1	18.2	498.7	11.7	87.9
485	31378	2.7	17.4868	0.8	0.6370	2.4	0.0808	2.3	0.94	500.8	10.9	500.4	9.5	498.7	17.7	500.8	10.9	100.4
152	21890	1.5	17.2097	1.1	0.6473	3.4	0.0808	3.2	0.94	500.8	15.2	506.8	13.4	533.8	25.0	500.8	15.2	93.8
202	22766	2.3	17.5088	1.1	0.6370	2.7	0.0809	2.5	0.92	501.4	12.1	500.4	10.8	496.0	23.7	501.4	12.1	101.1
321	12790	2.9	17.5931	1.0	0.6342	2.7	0.0809	2.5	0.93	501.6	12.2	498.7	10.7	485.3	21.9	501.6	12.2	103.4
704	111264	1.1	17.5439	0.8	0.6369	2.3	0.0810	2.1	0.93	502.3	10.2	500.4	9.0	491.5	18.7	502.3	10.2	102.2
251	14811402	2.0	17.4573	0.9	0.6406	2.6	0.0811	2.5	0.95	502.7	12.0	502.7	10.4	502.5	18.9	502.7	12.0	100.1
1099	36031	1.8	16.9884	0.9	0.6595	2.1	0.0813	1.9	0.90	503.6	9.2	514.3	8.5	562.0	20.4	503.6	9.2	89.6
244	377954	1.9	17.1588	1.1	0.6535	2.8	0.0813	2.6	0.92	504.0	12.4	510.6	11.1	540.3	23.9	504.0	12.4	93.3
1066	142610	2.8	17.5266	0.8	0.6401	2.3	0.0814	2.1	0.94	504.3	10.3	502.4	8.9	493.7	16.7	504.3	10.3	102.1
962	545271	2.3	17.3316	0.8	0.6475	2.4	0.0814	2.3	0.94	504.4	11.1	506.9	9.7	518.3	18.1	504.4	11.1	97.3
374	861577	3.1	17.2455	1.2	0.6512	3.4	0.0815	3.1	0.94	504.8	15.3	509.2	13.4	529.3	25.7	504.8	15.3	95.4
421	500841	2.1	17.3672	0.9	0.6476	2.2	0.0816	2.0	0.92	505.5	9.9	507.0	8.8	513.8	18.7	505.5	9.9	98.4
487	209557	1.7	17.1663	0.8	0.6560	2.4	0.0817	2.2	0.94	506.1	10.8	512.2	9.5	539.3	18.0	506.1	10.8	93.8
267	11318	0.9	17.1117	1.4	0.6585	2.9	0.0817	2.6	0.88	506.4	12.5	513.7	11.7	546.3	30.2	506.4	12.5	92.7
407	87460	2.0	17.2757	0.9	0.6542	2.7	0.0820	2.6	0.94	507.8	12.5	511.0	10.8	525.4	19.4	507.8	12.5	96.7
91	246463	1.7	16.9359	1.4	0.6693	4.0	0.0822	3.8	0.93	509.3	18.4	520.3	16.4	568.8	31.1	509.3	18.4	89.5
223	30879	2.2	17.1725	0.9	0.6607	3.6	0.0823	3.5	0.97	509.8	17.0	515.0	14.5	538.5	20.1	509.8	17.0	94.7
413	67466	1.8	17.3966	0.9	0.6540	2.3	0.0825	2.1	0.92	511.1	10.5	511.0	9.3	510.1	19.8	511.1	10.5	100.2
1143	49945404	2.8	17.3797	0.9	0.6547	2.4	0.0825	2.2	0.92	511.2	10.9	511.4	9.6	512.2	20.0	511.2	10.9	99.8
202	96153	2.4	17.1360	0.9	0.6654	2.9	0.0827	2.7	0.94	512.2	13.2	517.9	11.6	543.2	20.6	512.2	13.2	94.3
367	36169	2.2	17.3472	1.2	0.6585	3.5	0.0828	3.3	0.94	513.1	16.4	513.7	14.2	516.3	25.8	513.1	16.4	99.4
344	41446	1.1	17.1672	1.2	0.6655	3.4	0.0829	3.1	0.93	513.1	15.5	518.0	13.7	539.2	26.9	513.1	15.5	95.2
457	304463	1.6	17.2131	0.8	0.6644	2.7	0.0830	2.6	0.95	513.7	12.7	517.3	10.9	533.4	17.6	513.7	12.7	96.3
186	16818	1.4	17.3461	0.8	0.6611	3.7	0.0832	3.6	0.98	515.0	17.8	515.3	14.9	516.5	17.4	515.0	17.8	99.7
296	47760	2.2	16.8622	1.0	0.6804	2.9	0.0832	2.7	0.94	515.2	13.6	527.0	11.9	578.3	20.7	515.2	13.6	89.1
398	22136	1.8	17.0155	1.2	0.6745	3.3	0.0832	3.1	0.94	515.4	15.5	523.4	13.7	558.6	25.4	515.4	15.5	92.3
225	11927	2.1	17.3528	1.2	0.6620	2.8	0.0833	2.5	0.91	515.9	12.6	515.8	11.3	515.6	25.9	515.9	12.6	100.0
391	215230	2.1	17.1451	1.0	0.6701	3.3	0.0833	3.1	0.96	515.9	15.6	520.8	13.4	542.0	20.8	515.9	15.6	95.2
328	86206	2.0	17.1225	1.0	0.6713	2.5	0.0834	2.3	0.93	516.2	11.6	521.5	10.3	544.9	20.9	516.2	11.6	94.7
526	334892	2.3	17.3860	1.0	0.6614	2.5	0.0834	2.3	0.93	516.4	11.5	515.4	10.1	511.5	20.9	516.4	11.5	101.0
628	180025	2.1	17.1811	0.8	0.6707	2.7	0.0836	2.5	0.95	517.5	12.6	521.2	10.8	537.4	18.1	517.5	12.6	96.3
541	53474	1.4	17.4939	1.2	0.6595	2.7	0.0837	2.5	0.90	518.0	12.4	514.3	11.1	497.8	26.0	518.0	12.4	104.1
116	27350	2.2	17.2821	1.4	0.6689	3.4	0.0838	3.1	0.91	519.0	15.4	520.1	13.9	524.6	31.7	519.0	15.4	98.9
634	554543	2.3	17.1155	0.9	0.6759	2.0	0.0839	1.8	0.89	519.3	8.8	524.3	8.1	545.8	20.1	519.3	8.8	95.1
167	748287	2.2	16.8806	1.1	0.6853	3.0	0.0839	2.8	0.93	519.4	14.1	530.0	12.5	575.9	23.3	519.4	14.1	90.2
269	91688	1.8	17.2018	1.0	0.6726	2.9	0.0839	2.7	0.94	519.4	13.6	522.3	11.8	534.8	20.9	519.4	13.6	97.1
913	55393	4.0	17.3527	0.8	0.6679	1.9	0.0841	1.8	0.91	520.3	8.8	519.4	7.9	515.6	18.1	520.3	8.8	100.9
500	108382	2.6	17.4403	0.9	0.6649	2.7	0.0841	2.5	0.94	520.6	12.7	517.6	11.0	504.6	20.0	520.6	12.7	103.2
339	132635	2.5	16.7698	1.2	0.6921	3.2	0.0842	3.0	0.93	521.0	15.1	534.1	13.5	590.2	25.5	521.0	15.1	88.3
457	313678	1.6	17.0504	1.0	0.6815	2.7	0.0843	2.5	0.93	521.6	12.5	527.7	11.0	554.1	20.9	521.6	12.5	94.1
174	11075	2.0	16.9479	1.3	0.6860	3.0	0.0843	2.7	0.91	521.8	13.5	530.4	12.3	567.3	27.5	521.8	13.5	92.0
206	42720	2.1	16.9583	1.2	0.6858	3.2	0.0843	3.0	0.93	522.0	14.9	530.2	13.2	565.9	26.0	522.0	14.9	92.2
415	71911	3.1	17.1569	0.9	0.6780	2.9	0.0844	2.8	0.95	522.2	13.9	525.6	11.9	540.5	19.7	522.2	13.9	96.6
174	51900	1.7	17.0836	1.2	0.6816	3.1	0.0845	2.9	0.92	522.7	14.4	527.8	12.8	549.9	25.9	522.7	14.4	95.1
219	11861	3.8	17.3629	1.4	0.6709	3.3	0.0845	3.0	0.91	522.8	15.2	521.2	13.6	514.3	30.7	522.8	15.2	101.6
450	25416	5.0	17.3217	0.9	0.6746	2.9	0.0847	2.7	0.95	524.4	13.7	523.5	11.8	519.6	19.8	524.4	13.7	100.9
213	180177	2.1	17.0405	1.1	0.6865	4.0	0.0848	3.8	0.96	525.0	19.4	530.7	16.6	555.4	24.5	525.0	19.4	94.5
600	38312	19.0	17.1550	0.9	0.6835	2.7	0.0850	2.6	0.95	526.1	13.2	528.9	11.3	540.7	18.8	526.1	13.2	97.3
482	122420	2.4	17.1419	1.0	0.6845	2.7	0.0851	2.5	0.93	526.5	12.6	529.5	11.0	542.5	20.9	526.5	12.6	97.1
567	81149	3.8	16.9129	1.0	0.6954	2.8	0.0853	2.6	0.93	527.7	13.4	536.1	11.9	571.7	22.7	527.7	13.4	92.3
207	639931	1.9	16.7508	1.5	0.7033	2.8	0.0854	2.4	0.85	528.5	12.1	540.7	11.8	592.6	32.2	528.5	12.1	89.2
264	17125	2.7	17.0148	1.0	0.6924	2.3	0.0854	2.0	0.89	528.5	10.2	534.2	9.4	558.7	22.8	528.5	10.2	94.6

489	51116	1.7	17.2462	0.8	0.6838	2.9	0.0855	2.7	0.96	529.0	13.9	529.1	11.8	529.2	17.8	529.0	13.9	100.0
710	17721	2.7	16.6140	0.8	0.7109	2.5	0.0857	2.3	0.94	529.8	11.8	545.3	10.4	610.4	18.2	529.8	11.8	86.8
427	119615	1.9	16.9362	0.9	0.6988	2.6	0.0858	2.4	0.94	530.8	12.2	538.1	10.7	568.8	19.7	530.8	12.2	93.3
88	13659	1.2	16.8559	1.3	0.7026	3.6	0.0859	3.4	0.94	531.2	17.3	540.4	15.2	579.1	27.7	531.2	17.3	91.7
276	190073	2.4	17.2953	1.1	0.6865	3.7	0.0861	3.5	0.96	532.5	18.1	530.7	15.3	522.9	23.6	532.5	18.1	101.8
214	59896	1.5	17.1461	1.1	0.6934	2.5	0.0862	2.3	0.90	533.2	11.7	534.8	10.5	541.9	24.1	533.2	11.7	98.4
140	519103	1.8	17.1468	1.2	0.6961	2.8	0.0866	2.5	0.90	535.2	12.8	536.4	11.6	541.8	27.0	535.2	12.8	98.8
474	202448	1.9	17.2743	0.9	0.6926	2.8	0.0868	2.6	0.94	536.4	13.3	534.3	11.4	525.6	20.2	536.4	13.3	102.1
363	13088	1.7	16.9235	0.8	0.7080	2.3	0.0869	2.1	0.94	537.2	11.1	543.5	9.6	570.4	17.3	537.2	11.1	94.2
290	37113	2.6	17.2477	1.2	0.6956	2.8	0.0870	2.5	0.91	537.8	13.1	536.2	11.6	529.0	25.8	537.8	13.1	101.7
375	37041	1.7	16.9977	1.0	0.7061	2.8	0.0870	2.5	0.93	538.0	13.1	542.4	11.6	560.9	22.7	538.0	13.1	95.9
203	26439	2.1	16.8553	0.9	0.7131	3.9	0.0872	3.8	0.97	538.8	19.5	546.6	16.4	579.2	19.7	538.8	19.5	93.0
388	90222	2.1	17.3075	0.9	0.6954	2.5	0.0873	2.3	0.92	539.5	11.8	536.1	10.3	521.3	20.6	539.5	11.8	103.5
323	20207	3.5	16.9270	0.9	0.7174	2.5	0.0881	2.3	0.93	544.1	12.2	549.1	10.6	570.0	19.8	544.1	12.2	95.5
289	103678	2.9	17.0572	0.9	0.7164	2.7	0.0886	2.5	0.93	547.4	13.0	548.5	11.2	553.3	20.5	547.4	13.0	98.9
650	85880	1.2	17.0837	0.9	0.7155	2.5	0.0886	2.3	0.93	547.5	12.2	548.0	10.6	549.9	20.2	547.5	12.2	99.6
259	78269	2.3	16.8910	1.0	0.7243	2.9	0.0887	2.8	0.94	548.0	14.5	553.2	12.5	574.6	21.2	548.0	14.5	95.4
754	38348	16.0	16.7543	0.7	0.7310	3.1	0.0888	3.0	0.98	548.6	16.0	557.2	13.4	592.2	14.6	548.6	16.0	92.6
357	2929558	1.8	17.0606	0.7	0.7181	2.9	0.0889	2.8	0.97	548.7	14.6	549.5	12.2	552.8	16.0	548.7	14.6	99.3
614	70618	1.2	17.0512	0.8	0.7189	2.6	0.0889	2.5	0.95	549.0	13.0	550.0	11.0	554.0	17.4	549.0	13.0	99.1
251	10777	2.2	17.2296	1.0	0.7135	2.9	0.0892	2.8	0.94	550.5	14.6	546.8	12.4	531.3	21.5	550.5	14.6	103.6
197	26465	0.9	16.9756	1.0	0.7256	3.4	0.0893	3.2	0.96	551.6	17.0	554.0	14.3	563.7	21.5	551.6	17.0	97.9
781	130004	7.9	16.9850	0.6	0.7274	2.3	0.0896	2.2	0.97	553.2	11.6	555.0	9.6	562.5	12.0	553.2	11.6	98.4
699	81657	28.2	16.9061	0.9	0.7312	2.4	0.0897	2.2	0.93	553.5	11.8	557.3	10.3	572.6	19.0	553.5	11.8	96.7
328	98958	3.1	17.0768	0.9	0.7248	2.8	0.0898	2.6	0.94	554.1	13.8	553.5	11.8	550.8	19.8	554.1	13.8	100.6
199	48608	1.1	16.8015	1.1	0.7381	3.0	0.0899	2.7	0.92	555.2	14.6	561.3	12.8	586.1	24.7	555.2	14.6	94.7
316	30107	3.6	16.9636	0.8	0.7311	2.7	0.0899	2.6	0.96	555.2	13.7	557.2	11.6	565.2	17.4	555.2	13.7	98.2
633	41702	43.4	17.1382	1.0	0.7237	2.5	0.0899	2.3	0.92	555.2	12.5	552.8	10.9	542.9	21.6	555.2	12.5	102.3
1081	138921	7.4	16.9982	0.6	0.7301	2.4	0.0900	2.4	0.97	555.6	12.5	556.6	10.4	560.8	13.6	555.6	12.5	99.1
186	19645	4.1	17.0467	1.0	0.7297	3.3	0.0902	3.1	0.95	556.8	16.6	556.4	14.0	554.6	22.0	556.8	16.6	100.4
155	30354	1.1	16.9703	1.1	0.7335	3.4	0.0903	3.3	0.95	557.2	17.5	558.6	14.8	564.4	23.3	557.2	17.5	98.7
635	559507	1.5	16.9686	0.9	0.7340	2.7	0.0903	2.5	0.95	557.5	13.4	558.9	11.4	564.6	18.5	557.5	13.4	98.7
498	93575	1.8	16.9200	0.9	0.7366	3.0	0.0904	2.9	0.96	557.9	15.4	560.4	12.9	570.8	18.8	557.9	15.4	97.7
990	49394	18.3	17.1678	0.6	0.7294	2.1	0.0908	2.0	0.95	560.4	10.9	556.2	9.1	539.1	13.8	560.4	10.9	103.9
730	2233402	4.9	17.1777	1.0	0.7313	2.8	0.0911	2.6	0.94	562.1	14.2	557.3	12.0	537.9	20.8	562.1	14.2	104.5
550	84753	9.9	16.6680	1.0	0.7558	2.8	0.0914	2.6	0.94	563.6	13.9	571.6	12.0	603.4	21.1	563.6	13.9	93.4
350	202301	1.4	16.6627	0.7	0.7593	2.4	0.0918	2.3	0.95	565.9	12.5	573.6	10.6	604.1	16.0	565.9	12.5	93.7
481	420948	2.4	16.6581	0.9	0.7613	2.2	0.0920	2.1	0.91	567.2	11.1	574.7	9.9	604.7	19.8	567.2	11.1	93.8
1052	47405	19.8	17.1153	0.8	0.7481	2.9	0.0929	2.8	0.97	572.5	15.4	567.1	12.6	545.8	16.4	572.5	15.4	104.9
429	322627	3.0	16.6417	0.9	0.7719	3.1	0.0932	2.9	0.95	574.2	16.0	580.8	13.6	606.8	20.4	574.2	16.0	94.6
408	70299	8.0	16.9086	1.0	0.7611	2.4	0.0933	2.1	0.91	575.2	11.8	574.6	10.4	572.3	21.6	575.2	11.8	100.5

574	126059	2.5	17.0292	0.8	0.7567	2.4	0.0935	2.3	0.95	575.9	12.7	572.1	10.6	556.8	16.9	575.9	12.7	103.4
599	69009	10.5	16.9317	0.7	0.7667	2.4	0.0942	2.2	0.95	580.0	12.4	577.9	10.4	569.4	16.3	580.0	12.4	101.9
410	965351	5.9	16.9821	0.9	0.7661	2.4	0.0944	2.2	0.93	581.2	12.3	577.5	10.5	562.9	19.4	581.2	12.3	103.3
174	22203	3.0	16.7494	1.2	0.7788	3.6	0.0946	3.4	0.94	582.7	19.0	584.8	16.1	592.8	26.9	582.7	19.0	98.3
219	24596	0.9	16.8162	1.4	0.7758	3.0	0.0946	2.7	0.89	582.8	15.1	583.1	13.5	584.2	30.1	582.8	15.1	99.8
513	28306	11.2	16.8111	0.8	0.7787	2.3	0.0949	2.2	0.93	584.7	12.1	584.8	10.3	584.9	18.1	584.7	12.1	100.0
293	59310	1.4	16.7361	0.9	0.7890	2.8	0.0958	2.7	0.95	589.5	15.1	590.6	12.7	594.6	19.1	589.5	15.1	99.2
104	20162	0.9	16.8392	1.3	0.7868	3.3	0.0961	3.1	0.93	591.5	17.3	589.4	14.8	581.3	27.2	591.5	17.3	101.8
916	124731	4.1	16.8056	0.9	0.7899	2.2	0.0963	2.0	0.91	592.5	11.4	591.1	9.9	585.6	20.0	592.5	11.4	101.2
2167	74756	16.4	16.5871	1.0	0.8044	2.5	0.0968	2.3	0.92	595.5	13.2	599.3	11.4	613.9	20.6	595.5	13.2	97.0
687	65581	6.9	16.5450	0.7	0.8077	2.6	0.0969	2.5	0.96	596.3	14.0	601.1	11.6	619.4	14.8	596.3	14.0	96.3
1009	180980	4.7	16.8685	0.8	0.7949	2.2	0.0972	2.1	0.94	598.2	12.0	593.9	10.0	577.5	16.5	598.2	12.0	103.6
1777	97450	18.3	16.4048	0.6	0.8181	2.3	0.0973	2.2	0.97	598.8	12.8	607.0	10.6	637.8	12.9	598.8	12.8	93.9
1607	69195	24.4	16.4440	0.7	0.8231	2.3	0.0982	2.2	0.95	603.7	12.6	609.8	10.5	632.6	15.0	603.7	12.6	95.4
541	61272	39.1	16.6771	0.7	0.8121	2.2	0.0982	2.1	0.94	604.0	12.2	603.6	10.2	602.2	16.0	604.0	12.2	100.3
209	51796	0.9	16.3725	1.1	0.8360	3.2	0.0993	3.0	0.94	610.2	17.7	617.0	14.9	642.0	23.4	610.2	17.7	95.0
247	722696	0.9	16.4503	0.9	0.8343	2.7	0.0995	2.6	0.94	611.7	15.0	616.0	12.6	631.8	19.8	611.7	15.0	96.8
378	176614	2.2	15.9226	1.0	0.8670	3.4	0.1001	3.3	0.95	615.1	19.1	633.9	16.1	701.6	21.6	615.1	19.1	87.7
594	86620	5.4	16.5234	0.7	0.8361	2.3	0.1002	2.2	0.95	615.5	13.1	617.0	10.8	622.2	15.4	615.5	13.1	98.9
822	88811	31.0	16.5005	0.9	0.8382	3.1	0.1003	3.0	0.96	616.2	17.7	618.2	14.5	625.2	19.6	616.2	17.7	98.6
614	1264405	4.4	16.4502	0.8	0.8427	2.5	0.1005	2.3	0.94	617.6	13.8	620.6	11.6	631.8	18.1	617.6	13.8	97.7
168	35784	0.7	16.6559	1.0	0.8324	3.1	0.1006	2.9	0.95	617.6	17.2	614.9	14.2	605.0	21.5	617.6	17.2	102.1
670	86271	13.1	16.7486	0.9	0.8293	3.2	0.1007	3.1	0.96	618.7	18.1	613.2	14.8	592.9	20.4	618.7	18.1	104.3
239	17082	2.9	15.9820	1.1	0.8707	2.9	0.1009	2.7	0.92	619.8	15.7	635.9	13.6	693.7	23.8	619.8	15.7	89.4
171	75054	1.4	16.3510	1.2	0.8561	4.1	0.1015	3.9	0.95	623.3	23.0	628.0	19.0	644.8	26.1	623.3	23.0	96.7
184	55263	1.6	16.2403	0.9	0.8648	3.7	0.1019	3.5	0.97	625.3	21.1	632.8	17.2	659.4	19.1	625.3	21.1	94.8
481	397692	3.2	16.4616	0.8	0.8562	2.3	0.1022	2.2	0.93	627.4	13.1	628.1	11.0	630.3	18.1	627.4	13.1	99.5
576	138314	6.1	15.8976	1.0	0.8930	2.6	0.1030	2.4	0.93	631.7	14.3	648.0	12.3	704.9	20.5	631.7	14.3	89.6
1197	23282	2.3	16.1036	0.9	0.8866	2.4	0.1036	2.2	0.93	635.2	13.4	644.5	11.5	677.5	19.5	635.2	13.4	93.8
415	42346	2.6	16.2344	0.9	0.8813	3.0	0.1038	2.8	0.95	636.5	17.1	641.7	14.1	660.2	19.7	636.5	17.1	96.4
231	97394	2.4	16.1160	1.3	0.8878	3.6	0.1038	3.4	0.94	636.5	20.6	645.2	17.3	675.8	27.1	636.5	20.6	94.2
568	188721	2.3	16.4557	0.8	0.8697	2.9	0.1038	2.8	0.96	636.6	17.0	635.4	13.8	631.1	17.3	636.6	17.0	100.9
53	10406	1.6	16.4273	1.7	0.8760	4.9	0.1044	4.6	0.94	639.9	28.1	638.8	23.4	634.8	37.5	639.9	28.1	100.8
227	58659	0.7	16.1908	0.8	0.8910	3.5	0.1046	3.4	0.97	641.5	20.5	646.9	16.6	665.9	18.0	641.5	20.5	96.3
372	26203	2.9	16.3395	0.9	0.8847	2.7	0.1048	2.6	0.94	642.7	15.6	643.5	13.0	646.3	20.3	642.7	15.6	99.4
480	73615	1.2	16.4066	0.9	0.8837	2.9	0.1052	2.7	0.95	644.6	16.6	643.0	13.6	637.5	19.6	644.6	16.6	101.1
177	19344	1.6	16.3034	1.0	0.8946	3.5	0.1058	3.3	0.96	648.2	20.5	648.8	16.6	651.1	21.0	648.2	20.5	99.6
1659	84853	25.0	16.0267	0.7	0.9131	2.4	0.1061	2.3	0.95	650.2	14.3	658.7	11.8	687.7	16.0	650.2	14.3	94.5
1347	2103190	10.4	16.3049	0.7	0.8980	2.9	0.1062	2.8	0.97	650.6	17.2	650.7	13.9	650.9	15.9	650.6	17.2	100.0
1813	68393	3.7	15.9332	0.8	0.9205	2.3	0.1064	2.1	0.94	651.7	13.1	662.7	11.0	700.2	17.1	651.7	13.1	93.1
126	7872	1.5	16.5065	1.2	0.8913	3.9	0.1067	3.8	0.95	653.6	23.3	647.1	18.8	624.4	25.3	653.6	23.3	104.7

478	186579	6.2	15.6604	1.3	0.9403	5.2	0.1068	5.1	0.97	654.1	31.5	673.0	25.7	736.9	26.7	654.1	31.5	88.8
1424	110510	3.0	16.1237	0.7	0.9151	2.3	0.1070	2.2	0.95	655.4	13.7	659.8	11.3	674.8	15.9	655.4	13.7	97.1
530	18577	4.7	15.4694	0.8	0.9567	2.8	0.1073	2.7	0.96	657.2	16.9	681.6	14.1	762.7	17.7	657.2	16.9	86.2
340	264818	1.2	16.1726	0.8	0.9196	2.6	0.1079	2.5	0.95	660.3	15.8	662.1	12.9	668.4	17.7	660.3	15.8	98.8
317	36656	1.4	16.2087	1.0	0.9180	2.8	0.1079	2.6	0.94	660.6	16.3	661.3	13.4	663.5	20.9	660.6	16.3	99.6
1287	354726	5.5	16.1590	0.8	0.9240	2.1	0.1083	2.0	0.93	662.8	12.6	664.5	10.5	670.1	16.5	662.8	12.6	98.9
546	49727	4.2	15.9674	0.9	0.9388	2.3	0.1087	2.1	0.92	665.3	13.4	672.3	11.4	695.6	19.8	665.3	13.4	95.6
189	24778	1.9	16.0899	1.1	0.9365	3.4	0.1093	3.2	0.95	668.6	20.2	671.0	16.5	679.3	22.7	668.6	20.2	98.4
1824	623475	14.7	15.9650	0.8	0.9464	2.4	0.1096	2.3	0.95	670.3	14.5	676.2	11.9	695.9	16.0	670.3	14.5	96.3
1027	83339	2.9	16.1917	0.8	0.9413	2.3	0.1105	2.2	0.94	675.9	14.1	673.5	11.5	665.8	16.8	675.9	14.1	101.5
625	63910	4.9	16.0525	1.0	0.9526	2.3	0.1109	2.1	0.91	678.0	13.3	679.5	11.3	684.3	20.5	678.0	13.3	99.1
703	83128	3.5	15.7656	0.8	1.0082	3.2	0.1153	3.1	0.97	703.4	20.6	708.0	16.3	722.6	17.0	703.4	20.6	97.3
253	49946	2.5	15.6455	1.0	1.0210	3.0	0.1159	2.8	0.94	706.6	19.0	714.4	15.5	738.8	21.6	706.6	19.0	95.6
146	17839	6.1	15.8836	0.9	1.0069	3.0	0.1160	2.9	0.95	707.5	19.3	707.3	15.5	706.8	20.1	707.5	19.3	100.1
185	212485	2.2	15.1320	0.8	1.0570	3.4	0.1160	3.3	0.97	707.5	22.1	732.3	17.7	809.0	17.6	707.5	22.1	87.4
552	155938	2.7	15.3246	1.1	1.0642	3.3	0.1183	3.1	0.95	720.7	21.1	735.9	17.1	782.5	22.3	720.7	21.1	92.1
825	303007	3.6	15.3096	0.9	1.0705	2.2	0.1189	2.0	0.92	724.0	13.9	739.0	11.6	784.6	18.6	724.0	13.9	92.3
246	388423	2.4	15.2847	1.2	1.0745	3.0	0.1191	2.7	0.92	725.4	18.6	740.9	15.6	788.0	24.9	725.4	18.6	92.1
479	414054	2.6	14.9087	0.7	1.1254	2.8	0.1217	2.8	0.97	740.3	19.3	765.6	15.3	840.1	14.5	740.3	19.3	88.1
186	17556	1.6	14.5705	0.9	1.1733	2.2	0.1240	1.9	0.90	753.5	13.8	788.2	11.8	887.7	19.1	753.5	13.8	84.9
595	53170	14.6	14.9485	1.1	1.1445	3.7	0.1241	3.5	0.95	754.0	25.3	774.6	20.2	834.5	23.4	754.0	25.3	90.3
176	62560	1.9	14.7459	0.9	1.1699	3.6	0.1251	3.5	0.97	760.0	25.0	786.6	19.7	862.9	18.0	760.0	25.0	88.1
872	15089	4.9	14.0519	0.9	1.2453	2.2	0.1269	2.0	0.90	770.3	14.3	821.3	12.2	962.2	18.9	770.3	14.3	80.1
509	51406	5.3	15.0213	0.9	1.1778	2.7	0.1283	2.5	0.94	778.2	18.6	790.3	14.8	824.4	19.3	778.2	18.6	94.4
207	37663	5.3	14.9740	0.8	1.1911	3.6	0.1294	3.5	0.98	784.2	26.1	796.5	20.0	831.0	16.6	784.2	26.1	94.4
469	130347	2.0	14.3589	0.8	1.2910	2.6	0.1344	2.5	0.95	813.1	18.8	841.7	14.7	917.9	16.1	813.1	18.8	88.6
170	125310	2.1	15.0112	1.0	1.2369	3.0	0.1347	2.8	0.95	814.4	21.6	817.5	16.7	825.8	20.1	814.4	21.6	98.6
331	171563	1.8	14.1030	1.0	1.3458	3.2	0.1377	3.1	0.95	831.4	24.1	865.7	18.8	954.7	19.7	831.4	24.1	87.1
1014	558308	2.6	14.9950	0.8	1.2774	2.4	0.1389	2.3	0.94	838.5	17.9	835.7	13.8	828.1	17.2	838.5	17.9	101.3
439	48700	7.2	14.1651	1.0	1.4310	3.1	0.1470	2.9	0.95	884.2	24.2	902.0	18.4	945.7	19.5	945.7	19.5	93.5
604	520932	14.0	14.1529	0.8	1.4833	2.8	0.1523	2.7	0.96	913.6	23.1	923.6	17.1	947.5	16.4	947.5	16.4	96.4
327	322224	2.8	14.0940	0.8	1.4750	2.9	0.1508	2.8	0.96	905.3	23.5	920.2	17.6	956.0	16.9	956.0	16.9	94.7
823	129415	7.3	14.0840	0.8	1.4726	2.6	0.1504	2.5	0.96	903.3	21.3	919.2	15.9	957.5	15.4	957.5	15.4	94.3
342	1395885	4.9	14.0822	0.7	1.4969	3.0	0.1529	2.9	0.97	917.1	24.9	929.1	18.2	957.7	13.8	957.7	13.8	95.8
361	71235	2.2	14.0659	0.9	1.4451	3.2	0.1474	3.0	0.96	886.5	25.2	907.8	19.0	960.1	17.4	960.1	17.4	92.3
82	11255	2.4	14.0106	1.3	1.4018	4.4	0.1424	4.2	0.96	858.5	33.7	889.7	26.0	968.2	26.4	968.2	26.4	88.7
420	134515	3.2	13.9796	0.9	1.3642	4.1	0.1383	4.0	0.97	835.1	31.3	873.7	24.0	972.7	19.2	972.7	19.2	85.9
478	292720	2.0	13.8526	1.0	1.5674	2.5	0.1575	2.2	0.91	942.7	19.5	957.4	15.2	991.3	21.1	991.3	21.1	95.1
454	154063	3.0	13.8211	0.5	1.6208	2.4	0.1625	2.4	0.98	970.5	21.2	978.3	15.1	995.9	10.7	995.9	10.7	97.4
298	452724	2.4	13.8151	0.9	1.6713	2.5	0.1675	2.3	0.94	998.1	21.7	997.7	15.9	996.8	17.7	996.8	17.7	100.1
370	136059	1.7	13.8069	0.7	1.6490	3.3	0.1651	3.2	0.97	985.2	29.2	989.2	20.7	998.0	14.9	998.0	14.9	98.7
487	272027	2.6	13.8065	0.8	1.6202	2.7	0.1622	2.6	0.96	969.2	23.5	978.1	17.1	998.0	15.9	998.0	15.9	97.1
266	173311	1.8	13.7831	0.8	1.6685	2.7	0.1668	2.6	0.95	994.4	23.7	996.6	17.1	1001.5	16.4	1001.5	16.4	99.3
317	89563	2.6	13.7261	1.2	1.5338	4.4	0.1527	4.2	0.96	916.0	35.8	944.0	26.8	1009.9	23.8	1009.9	23.8	90.7
56	50908	2.4	13.7223	1.5	1.6773	4.3	0.1669	4.0	0.94	995.2	37.3	1000.0	27.4	1010.4	29.5	1010.4	29.5	98.5
16	3632	1.8	13.7078	2.4	1.7680	7.5	0.1758	7.1	0.95	1043.8	68.7	1033.8	48.8	1012.6	48.3	1012.6	48.3	103.1
784	444789	2.4	13.6821	0.8	1.6439	2.5	0.1631	2.4	0.95	974.1	21.8	987.2	16.0	1016.4	16.3	1016.4	16.3	95.8
567	130059	2.5	13.6811	1.0	1.6707	2.6	0.1658	2.4	0.93	988.8	22.4	997.5	16.7	1016.5	20.0	1016.5	20.0	97.3

786	88026	4.8	13.6771	0.6	1.6579	2.2	0.1645	2.1	0.96	981.5	19.5	992.6	14.1	1017.1	12.3	1017.1	12.3	96.5
1645	56788	2.0	13.6525	0.8	1.6259	2.7	0.1610	2.6	0.95	962.3	23.1	980.3	17.0	1020.8	16.4	1020.8	16.4	94.3
221	49197	2.0	13.6481	0.8	1.6816	3.2	0.1665	3.1	0.97	992.5	28.2	1001.6	20.2	1021.4	16.7	1021.4	16.7	97.2
649	142876	0.9	13.6403	0.8	1.7364	2.2	0.1718	2.0	0.93	1021.9	19.3	1022.1	14.2	1022.6	16.8	1022.6	16.8	99.9
152	15830	2.2	13.6384	1.2	1.6559	4.3	0.1638	4.1	0.96	977.8	37.3	991.8	27.1	1022.9	24.5	1022.9	24.5	95.6
372	34528	2.2	13.6290	1.0	1.7568	3.2	0.1737	3.0	0.94	1032.2	28.6	1029.7	20.5	1024.3	21.2	1024.3	21.2	100.8
192	198348	3.9	13.6185	1.2	1.7762	3.2	0.1754	3.0	0.93	1042.0	28.6	1036.8	20.8	1025.8	24.4	1025.8	24.4	101.6
257	30165	2.6	13.5889	1.0	1.6812	3.2	0.1657	3.0	0.95	988.4	27.8	1001.5	20.4	1030.2	20.5	1030.2	20.5	95.9
419	131443	7.7	13.5858	0.8	1.7612	2.4	0.1735	2.3	0.94	1031.6	21.5	1031.3	15.5	1030.7	16.6	1030.7	16.6	100.1
177	27036	3.8	13.5791	0.9	1.7162	3.2	0.1690	3.1	0.96	1006.7	28.6	1014.6	20.5	1031.7	17.6	1031.7	17.6	97.6
557	45734	1.0	13.4813	0.6	1.7585	2.8	0.1719	2.8	0.98	1022.8	26.2	1030.3	18.3	1046.3	12.2	1046.3	12.2	97.8
958	166719	3.3	13.4697	0.8	1.7387	2.4	0.1699	2.3	0.95	1011.3	21.5	1023.0	15.6	1048.0	15.7	1048.0	15.7	96.5
219	29983	3.5	13.4514	1.0	1.8313	3.3	0.1787	3.2	0.95	1059.6	31.0	1056.7	21.9	1050.8	20.5	1050.8	20.5	100.8
233	148656	2.2	13.4456	0.8	1.8674	3.3	0.1821	3.2	0.97	1078.5	31.4	1069.6	21.6	1051.6	16.2	1051.6	16.2	102.5
35	5623	1.3	13.4454	1.6	1.6354	6.1	0.1595	5.8	0.97	953.9	51.8	983.9	38.2	1051.7	31.6	1051.7	31.6	90.7
656	3097104	2.8	13.4155	0.8	1.7621	2.0	0.1714	1.9	0.93	1020.1	17.5	1031.6	13.0	1056.2	15.2	1056.2	15.2	96.6
48	51203	2.1	13.3928	1.3	1.7475	4.8	0.1697	4.6	0.96	1010.7	42.8	1026.2	30.7	1059.6	26.0	1059.6	26.0	95.4
1388	39040	3.8	13.3877	0.6	1.6558	2.2	0.1608	2.1	0.96	961.1	18.8	991.8	14.0	1060.3	12.9	1060.3	12.9	90.6
1044	158584	3.1	13.3700	0.8	1.7910	2.5	0.1737	2.3	0.94	1032.3	22.4	1042.2	16.2	1063.0	16.4	1063.0	16.4	97.1
426	69126	3.9	13.3584	0.8	1.7332	3.0	0.1679	2.9	0.96	1000.6	26.7	1020.9	19.3	1064.7	16.4	1064.7	16.4	94.0
99	123120	2.7	13.3426	0.9	1.7744	3.6	0.1717	3.4	0.97	1021.5	32.5	1036.1	23.1	1067.1	17.7	1067.1	17.7	95.7
565	52823	3.1	13.3336	0.9	1.6169	2.7	0.1564	2.5	0.95	936.5	22.0	976.8	16.7	1068.5	17.1	1068.5	17.1	87.6
192	21184	1.4	13.3028	0.8	1.8251	3.2	0.1761	3.1	0.97	1045.6	30.3	1054.5	21.2	1073.1	15.5	1073.1	15.5	97.4
131	88567	2.3	13.2891	1.0	1.8437	2.9	0.1777	2.8	0.95	1054.4	27.1	1061.2	19.4	1075.2	19.2	1075.2	19.2	98.1
276	40203	1.8	13.2735	0.8	1.9291	2.8	0.1857	2.7	0.96	1098.1	27.6	1091.2	19.0	1077.5	15.6	1077.5	15.6	101.9
137	84967	3.1	13.2548	1.1	1.8495	4.1	0.1778	3.9	0.96	1055.0	38.4	1063.3	27.0	1080.4	22.3	1080.4	22.3	97.6
205	95563	1.8	13.2057	0.7	1.8533	2.5	0.1775	2.4	0.96	1053.3	23.6	1064.6	16.6	1087.8	13.6	1087.8	13.6	96.8
188	215395	1.7	13.1982	0.8	1.9147	2.7	0.1833	2.6	0.96	1084.9	25.7	1086.2	17.9	1088.9	15.2	1088.9	15.2	99.6
186	289463	1.8	13.1845	0.8	1.8675	2.8	0.1786	2.7	0.96	1059.2	26.6	1069.7	18.8	1091.0	16.1	1091.0	16.1	97.1
138	359031	2.0	13.1787	1.0	1.8571	3.8	0.1775	3.6	0.97	1053.3	35.2	1065.9	24.8	1091.9	19.2	1091.9	19.2	96.5
1721	62342	3.7	13.1778	0.9	1.8361	2.2	0.1755	2.1	0.92	1042.2	19.9	1058.5	14.8	1092.0	17.5	1092.0	17.5	95.4
123	34521	2.3	13.1614	1.0	1.8458	3.2	0.1762	3.1	0.95	1046.1	29.7	1061.9	21.3	1094.6	20.0	1094.6	20.0	95.6
92	13782	0.7	13.1473	1.1	1.8893	4.4	0.1802	4.2	0.97	1067.8	41.7	1077.3	29.1	1096.7	21.8	1096.7	21.8	97.4
164	23752	2.3	13.1321	1.2	1.9049	3.1	0.1814	2.9	0.93	1074.8	28.4	1082.8	20.6	1099.0	23.1	1099.0	23.1	97.8
286	133373	1.9	13.1215	0.9	1.8961	2.7	0.1804	2.5	0.95	1069.4	25.1	1079.7	17.9	1100.6	17.3	1100.6	17.3	97.2
426	88322	2.3	13.1135	0.8	1.9056	2.9	0.1812	2.8	0.96	1073.7	27.5	1083.1	19.3	1101.8	16.3	1101.8	16.3	97.4
153	10022	1.6	12.9919	1.0	1.7300	4.0	0.1630	3.9	0.97	973.5	34.8	1019.8	25.6	1120.5	20.0	1120.5	20.0	86.9
241	133578	2.6	12.9500	0.6	1.9842	2.6	0.1864	2.5	0.97	1101.6	25.5	1110.1	17.5	1126.9	12.7	1126.9	12.7	97.8
57	11104	1.2	12.8872	1.3	1.9444	4.5	0.1817	4.3	0.96	1076.4	42.6	1096.5	30.1	1136.6	25.7	1136.6	25.7	94.7
668	42384	2.5	12.8863	0.8	2.0854	2.5	0.1949	2.3	0.95	1147.9	24.7	1144.0	17.0	1136.7	15.8	1136.7	15.8	101.0
221	146489	1.8	12.8432	0.8	2.0371	3.4	0.1897	3.3	0.97	1120.0	33.6	1128.0	22.9	1143.4	15.5	1143.4	15.5	98.0
412	1024766	3.1	12.8188	0.8	2.1087	2.4	0.1960	2.3	0.94	1154.0	23.8	1151.7	16.4	1147.1	15.9	1147.1	15.9	100.6
841	42816	1.1	12.7769	0.9	1.8613	2.8	0.1725	2.7	0.95	1025.8	25.3	1067.5	18.6	1153.6	17.7	1153.6	17.7	88.9
150	18635	2.1	12.5631	0.9	2.1446	6.1	0.1954	6.0	0.99	1150.6	63.5	1163.3	42.3	1187.1	18.7	1187.1	18.7	96.9
75	12256	0.8	12.5352	1.1	2.1458	3.3	0.1951	3.1	0.94	1148.9	32.5	1163.7	22.8	1191.5	22.6	1191.5	22.6	96.4
1192	537255	2.5	12.4652	0.6	2.2299	2.5	0.2016	2.4	0.97	1183.9	26.0	1190.5	17.4	1202.5	12.5	1202.5	12.5	98.5
268	130007	0.4	11.6551	0.8	2.6589	3.0	0.2248	2.9	0.96	1307.0	34.0	1317.1	22.1	1333.6	16.3	1333.6	16.3	98.0
520	13953148	2.6	11.1416	0.8	2.7205	2.1	0.2198	1.9	0.93	1281.0	22.3	1334.1	15.3	1420.3	14.5	1420.3	14.5	90.2

119	63166	1.0	11.0978	1.0	2.9774	3.8	0.2396	3.6	0.97	1384.9	45.4	1401.9	28.7	1427.8	18.7	1427.8	18.7	97.0
139	36103	0.5	11.0925	0.7	3.0205	3.4	0.2430	3.4	0.98	1402.3	42.2	1412.8	26.1	1428.7	13.1	1428.7	13.1	98.1
64	23804	1.2	11.0427	0.8	3.0773	4.6	0.2465	4.6	0.98	1420.2	58.2	1427.1	35.6	1437.3	15.6	1437.3	15.6	98.8
406	218255	1.3	10.9426	0.9	3.1093	2.8	0.2468	2.6	0.94	1421.8	33.7	1435.0	21.5	1454.6	17.6	1454.6	17.6	97.7
152	27934	1.1	10.5095	0.8	3.6175	3.1	0.2757	2.9	0.96	1569.8	41.1	1553.4	24.4	1531.1	15.7	1531.1	15.7	102.5
763	643224	1.6	10.3190	0.7	3.7091	2.1	0.2776	1.9	0.93	1579.2	27.0	1573.3	16.5	1565.4	14.0	1565.4	14.0	100.9
248	129719	1.0	10.2083	0.8	3.6960	2.6	0.2736	2.5	0.95	1559.3	34.4	1570.5	20.9	1585.6	15.0	1585.6	15.0	98.3
254	44388	1.9	9.9933	0.9	3.9593	3.3	0.2870	3.2	0.96	1626.3	45.8	1625.9	26.8	1625.3	16.3	1625.3	16.3	100.1
79	226792	2.4	9.9003	1.0	3.5749	4.5	0.2567	4.4	0.98	1472.9	58.2	1544.0	35.9	1642.7	18.1	1642.7	18.1	89.7
136	27093	2.4	9.8287	1.0	4.0249	3.0	0.2869	2.9	0.94	1626.1	41.0	1639.2	24.6	1656.1	18.8	1656.1	18.8	98.2
534	673180	1.7	9.7576	0.7	3.9631	2.5	0.2805	2.4	0.96	1593.7	34.0	1626.7	20.4	1669.6	13.4	1669.6	13.4	95.5
193	73414	1.8	9.2203	0.7	4.5235	3.3	0.3025	3.2	0.98	1703.7	48.2	1735.3	27.4	1773.6	12.7	1773.6	12.7	96.1
327	164076	1.5	9.1306	0.8	4.7604	2.7	0.3152	2.5	0.95	1766.4	38.9	1777.9	22.3	1791.5	15.3	1791.5	15.3	98.6
1003	11656	2.3	9.1043	0.7	4.5334	2.0	0.2993	1.9	0.94	1688.0	28.0	1737.1	16.7	1796.7	12.5	1796.7	12.5	94.0
503	101632	2.5	8.9866	0.8	4.9461	2.6	0.3224	2.4	0.94	1801.3	38.1	1810.2	21.7	1820.4	15.4	1820.4	15.4	99.0
598	290500	8.9	8.9116	0.8	4.5992	2.3	0.2973	2.1	0.93	1677.7	31.7	1749.1	19.3	1835.6	15.4	1835.6	15.4	91.4
373	16333	1.5	8.8967	1.0	4.9168	3.1	0.3173	2.9	0.94	1776.3	45.8	1805.1	26.4	1838.6	18.9	1838.6	18.9	96.6
659	523396	3.1	8.1301	0.7	5.5129	2.8	0.3251	2.7	0.96	1814.4	42.5	1902.6	23.9	2000.2	13.1	2000.2	13.1	90.7
127	89307	2.7	6.6558	0.8	9.0260	3.5	0.4357	3.4	0.97	2331.4	66.2	2340.6	31.8	2348.7	13.6	2348.7	13.6	99.3
159	92855	2.4	6.2901	1.2	9.7637	4.1	0.4454	4.0	0.96	2374.9	78.7	2412.7	38.1	2444.8	20.1	2444.8	20.1	97.1
215	75066	1.5	5.4552	0.8	12.3187	2.9	0.4874	2.8	0.96	2559.4	59.6	2629.0	27.6	2683.1	13.7	2683.1	13.7	95.4
60	92748	0.8	5.4157	0.9	12.7426	4.5	0.5005	4.4	0.98	2616.0	95.6	2660.8	42.7	2695.1	14.2	2695.1	14.2	97.1
372	147853	2.5	5.3292	0.9	11.0743	2.7	0.4280	2.6	0.94	2296.8	49.4	2529.4	25.3	2721.6	15.3	2721.6	15.3	84.4
335	122707	2.0	5.1852	0.7	13.4626	2.3	0.5063	2.2	0.95	2640.7	47.0	2712.7	21.6	2766.7	11.8	2766.7	11.8	95.4
407	843134	1.3	5.1747	0.7	14.2580	2.7	0.5351	2.6	0.96	2763.0	58.1	2767.0	25.4	2770.0	11.6	2770.0	11.6	99.7
301	80509	3.1	4.8717	0.8	13.6399	3.0	0.4819	2.9	0.97	2535.7	61.0	2725.0	28.5	2868.5	12.8	2868.5	12.8	88.4
318	537961	1.3	4.5103	0.6	15.1287	2.6	0.4949	2.5	0.97	2591.8	53.2	2823.4	24.5	2993.2	10.2	2993.2	10.2	86.6

YAR4B Sandstone

U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
136	34770	2.2	17.0714	1.4	0.6159	2.5	0.0763	2.1	0.83	473.8	9.5	487.3	9.7	551.4	31.0	473.8	9.5	85.9
197	24116	2.3	17.1219	0.7	0.6172	1.9	0.0766	1.7	0.92	476.0	7.9	488.1	7.3	545.0	16.1	476.0	7.9	87.3
285	71579	1.7	17.3165	0.7	0.6107	2.1	0.0767	1.9	0.94	476.4	8.9	484.0	8.0	520.2	16.1	476.4	8.9	91.6
256	25228	2.7	17.4352	0.9	0.6120	2.4	0.0774	2.2	0.92	480.5	10.1	484.8	9.1	505.2	20.0	480.5	10.1	95.1
227	26913	1.3	17.2322	0.8	0.6194	2.6	0.0774	2.4	0.95	480.6	11.2	489.4	9.9	531.0	17.5	480.6	11.2	90.5
183	63928	1.6	17.1126	1.1	0.6250	2.5	0.0776	2.3	0.91	481.6	10.5	493.0	9.8	546.1	23.1	481.6	10.5	88.2
155	110083	1.8	17.1542	1.0	0.6270	2.5	0.0780	2.3	0.91	484.2	10.9	494.2	10.0	540.9	22.6	484.2	10.9	89.5
214	201817	2.1	17.0771	1.0	0.6300	2.2	0.0780	2.0	0.89	484.3	9.1	496.1	8.6	550.7	21.8	484.3	9.1	87.9
517	432450	2.2	17.3791	0.7	0.6211	2.2	0.0783	2.1	0.95	485.9	9.8	490.6	8.6	512.3	15.2	485.9	9.8	94.8
188	14787	1.3	17.4172	1.0	0.6199	2.1	0.0783	1.9	0.89	486.0	8.9	489.8	8.3	507.5	21.3	486.0	8.9	95.8
114	8346	1.0	17.7461	1.1	0.6087	3.1	0.0783	2.9	0.93	486.2	13.7	482.7	12.0	466.2	25.0	486.2	13.7	104.3
141	26556	2.9	17.2383	0.9	0.6267	2.4	0.0783	2.2	0.92	486.3	10.3	494.0	9.4	530.2	20.3	486.3	10.3	91.7
162	818062	1.7	17.3363	1.0	0.6238	3.1	0.0784	2.9	0.94	486.7	13.6	492.2	12.0	517.7	22.8	486.7	13.6	94.0
264	46493	0.8	17.5526	0.9	0.6166	2.5	0.0785	2.3	0.94	487.1	10.9	487.7	9.6	490.5	19.2	487.1	10.9	99.3
248	50010	2.0	17.0408	0.9	0.6354	2.6	0.0785	2.4	0.93	487.4	11.2	499.5	10.1	555.3	20.2	487.4	11.2	87.8
379	782552	2.9	17.1698	0.7	0.6307	1.9	0.0785	1.8	0.93	487.4	8.3	496.5	7.5	538.8	15.8	487.4	8.3	90.5
313	68389	3.2	17.3149	0.8	0.6255	2.2	0.0785	2.0	0.92	487.5	9.4	493.3	8.4	520.4	18.1	487.5	9.4	93.7
178	1374583	1.1	17.1636	1.0	0.6311	2.6	0.0786	2.5	0.93	487.5	11.5	496.8	10.4	539.6	21.4	487.5	11.5	90.3
216	21706	2.7	17.2882	1.0	0.6266	2.3	0.0786	2.1	0.91	487.6	9.7	494.0	8.9	523.8	21.2	487.6	9.7	93.1
410	50540	3.6	17.5254	0.7	0.6192	1.9	0.0787	1.7	0.92	488.4	8.0	489.3	7.2	493.9	16.4	488.4	8.0	98.9
135	8658	1.3	16.8493	1.2	0.6443	3.1	0.0787	2.8	0.92	488.6	13.3	505.0	12.3	579.9	26.9	488.6	13.3	84.2
119	14291	2.5	17.4893	1.1	0.6215	2.7	0.0788	2.5	0.92	489.2	11.7	490.8	10.5	498.4	23.7	489.2	11.7	98.1
159	75746	3.0	16.9976	1.0	0.6400	2.7	0.0789	2.5	0.93	489.5	11.8	502.3	10.7	560.9	21.9	489.5	11.8	87.3
150	33422	2.3	17.1322	0.7	0.6349	2.0	0.0789	1.9	0.93	489.5	8.9	499.2	8.0	543.7	15.9	489.5	8.9	90.0
234	66610	2.5	17.0607	0.8	0.6386	2.2	0.0790	2.1	0.93	490.3	9.8	501.5	8.8	552.8	17.7	490.3	9.8	88.7
333	113980	1.8	17.2011	0.6	0.6342	2.2	0.0791	2.1	0.96	490.9	9.8	498.7	8.5	534.9	13.5	490.9	9.8	91.8
79	22950	2.5	16.9007	1.4	0.6459	3.4	0.0792	3.1	0.91	491.2	14.7	506.0	13.6	573.3	30.6	491.2	14.7	85.7
655	29908	3.2	17.6042	0.5	0.6202	1.9	0.0792	1.8	0.96	491.3	8.7	490.0	7.5	484.0	11.8	491.3	8.7	101.5
384	39504	3.4	17.4199	0.8	0.6279	2.3	0.0793	2.1	0.94	492.2	10.1	494.8	8.9	507.1	17.7	492.2	10.1	97.0
273	57728	2.6	17.1878	0.7	0.6371	2.4	0.0794	2.3	0.95	492.7	10.8	500.5	9.5	536.6	15.7	492.7	10.8	91.8
341	78041	4.9	17.1629	0.6	0.6396	2.4	0.0796	2.3	0.97	493.9	10.8	502.1	9.3	539.8	13.1	493.9	10.8	91.5
383	104313	2.1	17.1628	0.8	0.6397	2.3	0.0796	2.1	0.94	493.9	10.1	502.1	8.9	539.8	16.5	493.9	10.1	91.5
448	41279	3.4	17.5040	0.7	0.6275	2.4	0.0797	2.3	0.95	494.1	10.8	494.6	9.3	496.5	15.8	494.1	10.8	99.5
832	725777	7.1	17.4148	0.7	0.6309	2.0	0.0797	1.8	0.94	494.2	8.7	496.6	7.7	507.8	15.1	494.2	8.7	97.3
476	174446	5.6	17.2319	0.6	0.6376	1.6	0.0797	1.5	0.92	494.3	7.2	500.8	6.5	531.0	14.0	494.3	7.2	93.1
219	28040	4.0	16.9564	1.0	0.6483	2.5	0.0797	2.3	0.92	494.5	11.0	507.5	10.0	566.2	21.0	494.5	11.0	87.3
668	114896	3.1	17.4988	0.7	0.6285	2.2	0.0798	2.1	0.94	494.7	9.8	495.2	8.6	497.2	16.4	494.7	9.8	99.5
187	34502	1.5	17.4381	0.9	0.6311	2.9	0.0798	2.8	0.96	495.0	13.4	496.8	11.6	504.8	19.0	495.0	13.4	98.1
287	39817	2.1	17.2162	0.8	0.6402	2.4	0.0799	2.2	0.93	495.8	10.6	502.4	9.4	533.0	18.5	495.8	10.6	93.0
195	39127	2.6	16.9063	0.7	0.6522	2.8	0.0800	2.7	0.97	496.0	12.8	509.9	11.1	572.6	15.7	496.0	12.8	86.6
183	24807	1.9	17.3641	1.0	0.6352	2.5	0.0800	2.2	0.91	496.1	10.7	499.3	9.7	514.2	22.4	496.1	10.7	96.5
167	18381	1.9	17.3972	1.1	0.6342	2.6	0.0800	2.4	0.91	496.3	11.4	498.7	10.4	510.0	24.6	496.3	11.4	97.3
182	12897	4.4	17.2467	1.1	0.6398	2.5	0.0800	2.3	0.90	496.3	10.9	502.2	10.1	529.1	24.3	496.3	10.9	93.8
786	51825	3.0	17.3511	0.8	0.6363	1.6	0.0801	1.4	0.88	496.5	6.7	500.0	6.3	515.8	16.7	496.5	6.7	96.3
219	202466	2.1	17.1294	1.0	0.6447	2.1	0.0801	1.9	0.88	496.7	8.9	505.2	8.3	544.0	21.4	496.7	8.9	91.3
240	12637	3.7	16.8391	0.9	0.6572	2.1	0.0803	1.9	0.91	497.7	9.2	512.9	8.5	581.3	19.1	497.7	9.2	85.6
216	88214	3.1	17.0516	0.9	0.6494	3.0	0.0803	2.8	0.95	498.0	13.4	508.1	11.8	554.0	20.2	498.0	13.4	89.9
71	7355	2.4	16.5665	1.3	0.6694	3.9	0.0804	3.6	0.94	498.7	17.5	520.3	15.7	616.6	27.5	498.7	17.5	80.9
150	279589	2.5	16.7699	1.0	0.6614	2.6	0.0804	2.5	0.93	498.8	11.8	515.5	10.7	590.2	21.2	498.8	11.8	84.5
201	40762	2.2	17.1369	0.8	0.6478	2.6	0.0805	2.5	0.95	499.2	12.0	507.1	10.5	543.0	18.5	499.2	12.0	91.9
128	10620	2.8	17.4778	1.1	0.6356	2.6	0.0806	2.4	0.90	499.5	11.3	499.6	10.3	499.9	24.6	499.5	11.3	99.9
104	40480	1.9	16.7165	1.2	0.6647	3.1	0.0806	2.9	0.92	499.6	13.9	517.5	12.7	597.1	26.1	499.6	13.9	83.7
342	53959	2.8	17.2567	0.8	0.6440	2.1	0.0806	2.0	0.92	499.7	9.4	504.8	8.5	527.8	18.5	499.7	9.4	94.7
541	388569	5.3	17.3278	0.8	0.6414	2.2	0.0806	2.1	0.93	499.8	10.0	503.2	8.9	518.8	17.9	499.8	10.0	96.3
459	38100	3.2	17.2025	0.8	0.6465	2.2	0.0807	2.1	0.93	500.0	9.9	506.3	8.9	534.7	17.9	500.0	9.9	93.5
177	37987	1.6	16.8342	0.9	0.6611	2.4	0.0807	2.2	0.92	500.4	10.8	515.3	9.9	581.9	20.4	500.4	10.8	86.0
205	105382	2.7	17.0205	0.7	0.6540	1.9	0.0807	1.8	0.93	500.5	8.6	510.9	7.7	557.9	15.8	500.5	8.6	89.7
172	26494	2.3	16.8138	0.9	0.6630	2.6	0.0809	2.5	0.94	501.2	11.9	516.5	10.6	584.5	19.2	501.2	11.9	85.7
112	9692	1.9	17.2965	1.5	0.6446	3.1	0.0809	2.7	0.87	501.2	13.1	505.1	12.4	522.7	33.2	501.2	13.1	95.9
804	78020	8.6	17.4069	0.8	0.6414	1.7	0.0810	1.5	0.88	501.9	7.0	503.2	6.6	508.8	17.3	501.9	7.0	98.7
377	311400	2.5	17.4499	0.7	0.6398	2.3	0.0810	2.2	0.95	501.9	10.6	502.2	9.2	503.4	16.4	501.9	10.6	99.7
477	310109	3.4	17.3325	0.8	0.6443	1.9	0.0810	1.8	0.92	502.1	8.6	505.0	7.7	518.2	17.1	502.1	8.6	96.9
267	76467	3.4	17.3411	1.0	0.6449	2.7	0.0811	2.5	0.93	502.7	12.1	505.3	10.6	517.1	20.9	502.7	12.1	97.2
155	19751	4.6	17.0266	0.7	0.6576	2.6	0.0812	2.5	0.96	503.3	12.2	513.1	10.6	557.2	15.5	503.3	12.2	90.3
198	2083536	2.9	17.2855	1.0	0.6478	2.7	0.0812	2.5	0.93	503.4	12.0	507.1	10.7	524.1	22.1	503.4	12.0	96.0
1074	104153	3.0	17.6258	0.6	0.6358	1.6	0.0813	1.5	0.93	503.7	7.0	499.7	6.1	481.2	12.4	503.7	7.0	104.7
134	23982	2.1	17.1326	1.0	0.6554	2.8	0.0814	2.6	0.93	504.7	12.7	511.8	11.2	543.6	22.2	504.7	12.7	92.8
465	90437	3.5	17.4009	0.7	0.6454	2.1	0.0815	2.0	0.93	504.8	9.5	505.6	8.3	509.6	16.4	504.8	9.5	99.1
150	13844	3.1	17.6253	1.1	0.6374	2.9	0.0815	2.7	0.93	505.0	13.2	500.7	11.6	481.3	24.2	505.0	13.2	104.9
345	33758	3.2	17.2212	0.8	0.6548	2.3	0.0818	2.1	0.93	506.8	10.3	511.5	9.1	532.3	17.7	506.8	10.3	95.2
310	689471	1.7	17.2767	0.8	0.6533	2.1	0.0819	1.9	0.92	507.2	9.4	510.5	8.4	525.3	17.8	507.2	9.4	96.6
192	78462	1.7	16.9986	0.9	0.6642	2.4	0.0819	2.2	0.93	507.4	10.9	517.2	9.7	560.7	19.9	507.4	10.9	90.5
293	146595	3.4	17.2342	0.8	0.6554	2.9	0.0819	2.8	0.96	507.6	13.5	511.8	11.6	530.7	18.6	507.6	13.5	95.6
717	247683	2.4	17.3095	0.6	0.6540	1.7	0.0821	1.6	0.93	508.6	7.8	510.9	6.9	521.1	14.0	508.6	7.8	97.6
283	91997	3.0	17.3953	0.9	0.6514	1.9	0.0822	1.7	0.88	509.1	8.2	509.3	7.6	510.3	19.6	509.1	8.2	99.8
103	70864	2.6	16.9134	1.1	0.6701	2.8	0.0822	2.5	0.92	509.3	12.4	520.8	11.2	571.7	24.1	509.3	12.4	89.1
599	1485644	2.4	17.5402	0.6	0.6463	1.5	0.0822	1.4	0.93	509.3	6.8	506.2	6.0	492.0	12.5	509.3	6.8	103.5
175	139462	1.7	16.7096	1.0	0.6791	2.5	0.0823	2.3	0.92	509.8	11.0	526.2	10.1	598.0	20.9	509.8	11.0	85.3

202	41552	2.6	17.5059	0.9	0.6484	2.4	0.0823	2.2	0.92	510.0	10.7	507.5	9.4	496.3	19.8	510.0	10.7	102.8
538	128173	3.5	17.2235	0.8	0.6593	2.1	0.0824	2.0	0.93	510.1	9.7	514.2	8.6	532.1	17.7	510.1	9.7	95.9
345	323296	3.1	16.9603	0.8	0.6696	2.1	0.0824	2.0	0.93	510.3	9.7	520.5	8.7	565.6	17.6	510.3	9.7	90.2
237	32149	2.4	17.2314	0.8	0.6599	2.0	0.0825	1.8	0.90	510.9	8.7	514.6	7.9	531.0	18.3	510.9	8.7	96.2
174	80287	2.6	16.7492	0.9	0.6792	2.5	0.0825	2.3	0.93	511.1	11.4	526.3	10.2	592.9	19.9	511.1	11.4	86.2
193	45715	2.6	17.2555	0.9	0.6594	2.4	0.0825	2.2	0.93	511.1	10.9	514.2	9.7	528.0	19.2	511.1	10.9	96.8
117	21875	5.5	16.4160	1.0	0.6938	2.6	0.0826	2.4	0.93	511.6	12.0	535.1	10.9	636.3	20.7	511.6	12.0	80.4
197	31423	2.8	16.9262	0.8	0.6731	2.4	0.0826	2.2	0.94	511.8	10.9	522.6	9.6	570.1	17.7	511.8	10.9	89.8
52	7198	2.1	17.4273	2.0	0.6541	3.6	0.0827	3.0	0.83	512.1	14.6	511.0	14.3	506.2	44.0	512.1	14.6	101.2
772	70795	3.1	17.4468	0.7	0.6540	1.6	0.0828	1.5	0.91	512.6	7.2	511.0	6.5	503.7	15.2	512.6	7.2	101.7
116	21163	1.4	16.8150	1.1	0.6795	2.5	0.0829	2.2	0.90	513.2	10.8	526.5	10.1	584.4	23.6	513.2	10.8	87.8
208	19703	2.4	17.2865	0.9	0.6614	2.2	0.0829	2.0	0.91	513.5	9.9	515.4	8.9	524.0	20.5	513.5	9.9	98.0
121	107553	2.3	16.9132	1.1	0.6761	2.8	0.0829	2.6	0.91	513.6	12.7	524.4	11.6	571.7	24.8	513.6	12.7	89.8
187	227011	2.6	17.0544	1.0	0.6708	2.5	0.0830	2.3	0.93	513.8	11.6	521.2	10.3	553.6	20.9	513.8	11.6	92.8
62	4941	2.2	17.3039	1.2	0.6627	3.7	0.0832	3.5	0.95	515.0	17.1	516.2	14.8	521.8	25.9	515.0	17.1	98.7
592	2354318	2.4	17.0054	0.8	0.6744	2.0	0.0832	1.9	0.92	515.1	9.3	523.4	8.4	559.9	17.4	515.1	9.3	92.0
204	37364	3.3	16.8150	1.1	0.6822	2.1	0.0832	1.8	0.86	515.2	9.1	528.1	8.8	584.3	23.6	515.2	9.1	88.2
227	19089	2.4	17.3603	0.9	0.6609	1.9	0.0832	1.7	0.88	515.2	8.4	515.1	7.8	514.7	20.0	515.2	8.4	100.1
111	79539	2.6	16.8766	1.2	0.6799	2.8	0.0832	2.5	0.90	515.3	12.3	526.7	11.3	576.4	26.1	515.3	12.3	89.4
130	29795	2.9	17.1317	1.1	0.6701	2.7	0.0833	2.5	0.92	515.6	12.3	520.8	11.0	543.7	23.0	515.6	12.3	94.8
277	21220	3.1	17.1809	0.8	0.6701	2.2	0.0835	2.0	0.92	517.0	9.9	520.8	8.8	537.5	18.2	517.0	9.9	96.2
225	35540	2.6	17.1909	0.9	0.6706	2.2	0.0836	2.0	0.92	517.6	10.0	521.1	8.9	536.2	19.0	517.6	10.0	96.5
236	44666	3.2	16.9817	1.0	0.6790	2.5	0.0836	2.3	0.92	517.8	11.2	526.2	10.1	562.9	21.1	517.8	11.2	92.0
119	414516	3.6	16.7268	1.1	0.6917	3.2	0.0839	3.0	0.94	519.5	14.8	533.9	13.1	595.8	23.6	519.5	14.8	87.2
737	29103	8.0	16.9700	0.8	0.6823	1.9	0.0840	1.7	0.92	519.8	8.6	528.2	7.7	564.4	16.3	519.8	8.6	92.1
290	38110	2.2	17.2369	0.8	0.6723	2.0	0.0840	1.9	0.92	520.2	9.3	522.1	8.2	530.3	16.7	520.2	9.3	98.1
372	39658	1.6	17.0114	0.6	0.6820	2.4	0.0841	2.4	0.97	520.8	11.8	528.0	10.0	559.1	13.4	520.8	11.8	93.1
311	23428	1.9	17.2994	0.6	0.6713	1.9	0.0842	1.9	0.96	521.3	9.3	521.5	7.9	522.4	12.4	521.3	9.3	99.8
376	287590	2.1	17.0752	0.7	0.6802	2.4	0.0842	2.3	0.96	521.4	11.6	526.9	10.0	551.0	14.6	521.4	11.6	94.6
391	39216	5.2	17.2170	0.8	0.6747	2.1	0.0843	2.0	0.94	521.4	10.0	523.6	8.7	532.9	16.5	521.4	10.0	97.9
418	358075	5.1	17.0624	0.9	0.6814	2.2	0.0843	2.0	0.92	521.9	10.3	527.6	9.1	552.6	18.7	521.9	10.3	94.4
211	303829	3.1	17.1497	0.8	0.6792	2.0	0.0845	1.9	0.92	522.8	9.4	526.3	8.4	541.4	17.3	522.8	9.4	96.6
210	28115	3.8	16.9463	1.0	0.6881	2.0	0.0846	1.8	0.88	523.3	9.0	531.6	8.4	567.5	21.4	523.3	9.0	92.2
116	115754	1.8	16.5136	1.3	0.7063	2.9	0.0846	2.6	0.90	523.5	13.0	542.6	12.1	623.5	27.7	523.5	13.0	84.0
172	49614	2.3	16.7520	0.9	0.6970	2.4	0.0847	2.2	0.93	524.0	11.1	537.0	9.9	592.5	18.4	524.0	11.1	88.4
93	38532	1.9	16.5067	1.1	0.7078	3.2	0.0847	3.0	0.94	524.3	15.2	543.4	13.6	624.4	24.4	524.3	15.2	84.0
289	115425	7.1	17.1006	0.9	0.6837	2.1	0.0848	1.9	0.91	524.7	9.7	529.0	8.7	547.7	18.9	524.7	9.7	95.8
225	65679	2.9	16.9487	0.8	0.6902	1.9	0.0848	1.7	0.89	525.0	8.3	532.9	7.7	567.2	18.1	525.0	8.3	92.6
89	26799	3.1	16.9417	1.3	0.6913	3.6	0.0849	3.3	0.93	525.6	16.7	533.6	14.8	568.1	28.1	525.6	16.7	92.5
121	41014	3.6	16.8946	1.0	0.6939	2.4	0.0850	2.2	0.91	526.1	11.0	535.2	10.0	574.1	21.7	526.1	11.0	91.6
1119	83620	27.6	17.2581	0.8	0.6798	1.9	0.0851	1.7	0.90	526.4	8.5	526.7	7.7	527.7	18.1	526.4	8.5	99.8

153	10854	2.7	17.2341	1.0	0.6841	3.2	0.0855	3.0	0.95	528.9	15.2	529.2	13.0	530.7	21.7	528.9	15.2	99.7
265	108492	2.4	16.3905	1.1	0.7206	2.0	0.0857	1.7	0.85	529.8	8.7	551.0	8.5	639.6	22.6	529.8	8.7	82.8
230	135008	2.8	17.1030	0.8	0.6907	2.7	0.0857	2.6	0.95	529.9	13.0	533.2	11.1	547.4	17.7	529.9	13.0	96.8
200	120431	2.5	16.8736	0.8	0.7001	2.1	0.0857	1.9	0.92	529.9	9.7	538.8	8.7	576.8	18.2	529.9	9.7	91.9
1148	481439	1.0	17.2583	0.6	0.6869	2.2	0.0860	2.1	0.96	531.7	10.7	531.0	9.0	527.6	13.8	531.7	10.7	100.8
284	39936	3.7	17.2636	0.8	0.6872	2.1	0.0860	1.9	0.93	532.1	9.9	531.1	8.6	527.0	17.0	532.1	9.9	101.0
296	78009	10.5	16.9409	0.8	0.7023	1.6	0.0863	1.3	0.84	533.6	6.7	540.2	6.5	568.2	18.3	533.6	6.7	93.9
233	9745	2.8	16.3387	1.8	0.7282	2.5	0.0863	1.8	0.70	533.6	9.1	555.5	10.8	646.4	38.4	533.6	9.1	82.5
353	179166	2.4	16.9352	0.7	0.7044	2.4	0.0865	2.2	0.95	534.9	11.5	541.4	9.9	568.9	16.3	534.9	11.5	94.0
224	15296	5.1	17.1719	0.9	0.6949	2.5	0.0865	2.4	0.94	535.0	12.2	535.7	10.6	538.6	19.8	535.0	12.2	99.3
97	117421	2.7	16.8926	1.0	0.7066	3.1	0.0866	2.9	0.94	535.3	14.8	542.8	12.9	574.3	22.1	535.3	14.8	93.2
210	21289	1.8	17.2550	0.9	0.6918	2.3	0.0866	2.2	0.92	535.3	11.1	533.9	9.7	528.1	20.3	535.3	11.1	101.4
240	87317	2.0	16.6136	0.8	0.7205	2.2	0.0868	2.0	0.93	536.7	10.3	551.0	9.1	610.5	17.3	536.7	10.3	87.9
162	26492	4.6	16.7469	1.1	0.7150	2.8	0.0868	2.5	0.92	536.8	13.1	547.7	11.7	593.2	23.6	536.8	13.1	90.5
139	57952	23.5	16.3896	0.7	0.7308	2.4	0.0869	2.3	0.95	537.0	11.9	557.0	10.4	639.8	16.1	537.0	11.9	83.9
91	22438	1.1	16.9137	1.3	0.7082	3.2	0.0869	2.9	0.91	537.0	15.1	543.7	13.6	571.7	29.3	537.0	15.1	93.9
161	43261	2.0	16.6408	1.1	0.7201	2.9	0.0869	2.7	0.93	537.2	14.1	550.7	12.5	606.9	22.8	537.2	14.1	88.5
400	28285	3.7	16.8729	0.8	0.7107	2.0	0.0870	1.9	0.91	537.6	9.6	545.2	8.6	576.9	18.3	537.6	9.6	93.2
200	78503	2.7	16.7185	0.9	0.7205	2.5	0.0874	2.3	0.94	540.0	12.0	551.0	10.5	596.9	18.5	540.0	12.0	90.5
255	140648	5.3	17.0335	0.8	0.7086	2.6	0.0875	2.4	0.95	541.0	12.6	543.9	10.8	556.3	18.2	541.0	12.6	97.2
351	64158	3.8	17.1405	0.5	0.7048	2.0	0.0876	1.9	0.97	541.4	10.1	541.6	8.4	542.6	11.2	541.4	10.1	99.8
100	17018	1.0	16.6349	1.2	0.7294	2.4	0.0880	2.1	0.86	543.7	10.7	556.2	10.3	607.7	26.8	543.7	10.7	89.5
358	24914	2.7	17.2909	0.8	0.7032	2.3	0.0882	2.1	0.93	544.8	11.2	540.7	9.7	523.5	18.6	544.8	11.2	104.1
252	226590	3.3	16.7308	0.9	0.7276	1.9	0.0883	1.7	0.89	545.4	8.8	555.1	8.1	595.3	18.8	545.4	8.8	91.6
337	75128	2.5	16.9135	0.7	0.7205	2.3	0.0884	2.2	0.95	546.0	11.4	551.0	9.7	571.7	15.4	546.0	11.4	95.5
304	382744	3.7	17.0571	0.7	0.7177	1.9	0.0888	1.8	0.93	548.4	9.5	549.3	8.2	553.3	15.6	548.4	9.5	99.1
61	15232	1.3	16.5655	1.3	0.7397	3.4	0.0889	3.2	0.93	548.9	16.9	562.2	14.9	616.7	27.1	548.9	16.9	89.0
173	14733	1.5	16.9562	0.9	0.7229	2.1	0.0889	1.9	0.91	549.0	9.8	552.4	8.8	566.2	19.0	549.0	9.8	97.0
922	1764426	84.8	17.2836	0.6	0.7110	1.7	0.0891	1.5	0.92	550.4	8.1	545.4	7.0	524.4	13.9	550.4	8.1	105.0
168	29117	1.7	16.9748	1.0	0.7241	2.7	0.0891	2.5	0.92	550.5	13.3	553.1	11.6	563.8	22.7	550.5	13.3	97.6
207	52069	1.9	16.6803	1.0	0.7376	2.5	0.0892	2.3	0.92	551.0	12.2	561.0	10.9	601.8	21.8	551.0	12.2	91.6
115	20187	4.1	17.0405	1.1	0.7259	3.0	0.0897	2.8	0.93	553.9	14.6	554.2	12.6	555.4	22.9	553.9	14.6	99.7
362	197811	8.9	17.0894	0.9	0.7252	2.1	0.0899	1.9	0.90	554.9	10.0	553.8	8.9	549.1	19.7	554.9	10.0	101.0
214	85647	23.8	16.4005	1.1	0.7617	2.4	0.0906	2.1	0.89	559.1	11.5	575.0	10.5	638.3	23.5	559.1	11.5	87.6
200	427516	1.0	16.6361	1.0	0.7512	2.3	0.0906	2.1	0.90	559.3	11.0	568.9	9.9	607.5	21.0	559.3	11.0	92.1
95	199362	2.5	16.3127	1.1	0.7695	3.0	0.0910	2.8	0.94	561.7	15.3	579.5	13.4	649.8	22.7	561.7	15.3	86.4
184	27062	2.3	16.6842	0.8	0.7547	2.3	0.0913	2.2	0.94	563.4	11.9	571.0	10.3	601.3	17.5	563.4	11.9	93.7
682	122730	2.7	17.0185	0.7	0.7414	2.0	0.0915	1.9	0.94	564.4	10.0	563.2	8.6	558.2	15.1	564.4	10.0	101.1
224	60737	0.7	16.9722	0.8	0.7436	2.3	0.0915	2.1	0.94	564.6	11.6	564.5	9.9	564.1	16.8	564.6	11.6	100.1
357	26813	9.6	17.1230	0.7	0.7376	2.2	0.0916	2.1	0.94	565.0	11.4	561.0	9.6	544.8	16.2	565.0	11.4	103.7
233	148001	2.3	16.7416	1.0	0.7554	2.6	0.0917	2.4	0.92	565.7	12.9	571.4	11.3	593.9	22.2	565.7	12.9	95.3

97	40516	14.1	16.1105	1.1	0.7856	2.7	0.0918	2.4	0.91	566.2	13.1	588.7	11.9	676.6	23.2	566.2	13.1	83.7
106	23812	2.9	16.3802	1.0	0.7736	2.2	0.0919	2.0	0.89	566.8	10.8	581.8	9.9	641.0	21.8	566.8	10.8	88.4
272	62522	35.8	16.6057	0.9	0.7642	1.9	0.0920	1.7	0.90	567.6	9.4	576.4	8.5	611.5	18.6	567.6	9.4	92.8
327	229750	25.2	16.6279	0.8	0.7659	1.8	0.0924	1.6	0.90	569.5	8.8	577.4	8.0	608.6	17.4	569.5	8.8	93.6
187	409956	5.9	16.1432	0.8	0.7895	2.7	0.0924	2.6	0.95	569.9	14.2	590.9	12.2	672.3	17.6	569.9	14.2	84.8
105	34394	51.3	16.4758	1.0	0.7739	2.7	0.0925	2.5	0.93	570.2	13.7	582.0	12.0	628.4	21.3	570.2	13.7	90.7
199	49482	4.8	16.3075	1.0	0.7821	2.4	0.0925	2.2	0.91	570.3	12.2	586.7	10.9	650.5	21.9	570.3	12.2	87.7
40	6621	2.2	16.6659	1.5	0.7660	4.1	0.0926	3.8	0.93	570.8	20.8	577.4	18.0	603.6	31.6	570.8	20.8	94.6
63	9948	1.2	16.7562	1.2	0.7621	4.2	0.0926	4.0	0.95	571.0	21.7	575.2	18.2	592.0	26.8	571.0	21.7	96.5
85	11485	2.2	16.3719	1.3	0.7810	3.7	0.0927	3.5	0.94	571.7	19.0	586.1	16.5	642.1	27.8	571.7	19.0	89.0
139	13254	1.8	16.4505	1.0	0.7812	2.7	0.0932	2.5	0.93	574.5	14.0	586.2	12.2	631.8	22.2	574.5	14.0	90.9
287	80202	1.7	16.7170	0.8	0.7697	2.7	0.0933	2.6	0.96	575.1	14.5	579.6	12.1	597.1	17.0	575.1	14.5	96.3
330	1022068	4.8	16.8681	0.9	0.7645	2.7	0.0935	2.5	0.94	576.4	13.8	576.6	11.8	577.5	20.4	576.4	13.8	99.8
74	9939	2.0	16.5371	1.2	0.7810	3.5	0.0937	3.3	0.94	577.2	18.3	586.1	15.7	620.4	26.8	577.2	18.3	93.0
436	62471	4.8	16.8645	0.8	0.7661	1.9	0.0937	1.8	0.91	577.4	9.7	577.5	8.5	578.0	17.4	577.4	9.7	99.9
232	77189	1.8	16.6361	1.0	0.7910	2.7	0.0954	2.5	0.93	587.6	14.2	591.7	12.2	607.5	21.2	587.6	14.2	96.7
498	100932	1.9	16.8617	0.7	0.7850	2.1	0.0960	1.9	0.95	590.9	11.0	588.3	9.2	578.3	14.6	590.9	11.0	102.2
215	103803	2.1	16.6885	0.8	0.7973	2.6	0.0965	2.4	0.95	593.9	13.8	595.3	11.6	600.7	17.3	593.9	13.8	98.9
427	50448	2.8	16.8834	0.8	0.7885	2.1	0.0965	2.0	0.92	594.2	11.2	590.3	9.6	575.6	18.0	594.2	11.2	103.2
293	257712	14.1	15.7625	1.2	0.8456	3.2	0.0967	3.0	0.93	594.9	16.8	622.3	14.9	723.0	25.3	594.9	16.8	82.3
181	91145	1.7	16.1521	0.9	0.8321	2.4	0.0975	2.2	0.92	599.6	12.8	614.8	11.1	671.0	20.0	599.6	12.8	89.4
122	15733	1.5	16.3258	1.2	0.8332	3.0	0.0987	2.7	0.91	606.5	15.6	615.4	13.7	648.1	26.2	606.5	15.6	93.6
1074	130897	86.9	16.5819	0.7	0.8218	1.8	0.0988	1.7	0.91	607.5	9.7	609.0	8.3	614.6	16.0	607.5	9.7	98.9
334	56713	2.1	16.3848	0.6	0.8331	2.0	0.0990	1.9	0.96	608.5	10.9	615.3	9.1	640.4	12.4	608.5	10.9	95.0
265	113523	3.9	16.4850	0.7	0.8300	2.5	0.0992	2.5	0.96	610.0	14.3	613.6	11.7	627.2	14.4	610.0	14.3	97.2
179	5823151	1.7	16.3623	0.7	0.8449	2.3	0.1003	2.2	0.95	616.0	12.8	621.9	10.7	643.3	15.2	616.0	12.8	95.7
57	14255	1.7	16.1130	1.1	0.8598	3.8	0.1005	3.7	0.96	617.2	21.6	630.0	17.9	676.2	22.8	617.2	21.6	91.3
170	15662	1.7	16.7112	1.0	0.8306	2.6	0.1007	2.4	0.92	618.3	13.9	614.0	11.8	597.8	21.9	618.3	13.9	103.4
64	8309	5.3	16.4724	1.3	0.8470	3.3	0.1012	3.0	0.91	621.4	17.6	623.0	15.2	628.9	29.0	621.4	17.6	98.8
139	63180	2.8	16.1982	0.7	0.8618	2.5	0.1012	2.4	0.96	621.7	14.3	631.1	11.8	665.0	14.7	621.7	14.3	93.5
114	17219	2.1	16.4861	1.2	0.8480	3.0	0.1014	2.8	0.91	622.6	16.5	623.6	14.1	627.1	26.6	622.6	16.5	99.3
325	127736	7.6	16.0689	0.7	0.8746	2.2	0.1019	2.1	0.95	625.7	12.6	638.0	10.6	682.1	15.4	625.7	12.6	91.7
102	314672	2.0	15.8958	0.9	0.8886	3.0	0.1024	2.8	0.95	628.7	16.9	645.6	14.2	705.2	19.3	628.7	16.9	89.2
419	285317	3.7	16.5002	1.0	0.8577	2.8	0.1026	2.7	0.94	629.9	16.0	628.9	13.3	625.2	21.7	629.9	16.0	100.7
157	480680	4.3	15.4906	0.8	0.9175	2.5	0.1031	2.3	0.94	632.4	14.0	661.0	12.0	759.9	17.8	632.4	14.0	83.2
335	125069	8.1	15.8607	0.7	0.8985	2.9	0.1034	2.8	0.97	634.0	16.7	650.9	13.7	709.9	15.3	634.0	16.7	89.3
689	84330	5.3	16.4503	0.7	0.8756	2.7	0.1045	2.6	0.97	640.5	15.8	638.6	12.7	631.8	14.9	640.5	15.8	101.4
150	27923	4.1	16.0380	0.9	0.8994	2.3	0.1046	2.1	0.92	641.4	12.8	651.4	11.0	686.2	19.3	641.4	12.8	93.5
958	745720	38.5	16.3976	0.7	0.8815	1.9	0.1048	1.7	0.93	642.7	10.6	641.8	8.9	638.7	15.4	642.7	10.6	100.6
301	289596	3.7	16.4003	0.9	0.8892	2.3	0.1058	2.1	0.92	648.1	13.0	645.9	10.9	638.4	19.0	648.1	13.0	101.5
261	18476	7.8	16.4719	0.8	0.8865	2.3	0.1059	2.1	0.93	648.9	12.9	644.5	10.8	628.9	18.1	648.9	12.9	103.2

90	20203	3.5	15.8988	1.1	0.9228	2.8	0.1064	2.6	0.92	651.8	15.9	663.8	13.5	704.8	22.5	651.8	15.9	92.5
510	137442	4.5	16.4289	0.7	0.8956	1.9	0.1067	1.8	0.93	653.7	11.1	649.4	9.2	634.6	15.6	653.7	11.1	103.0
332	55661	8.2	16.1549	0.7	0.9133	2.1	0.1070	2.0	0.94	655.3	12.2	658.8	10.1	670.7	15.3	655.3	12.2	97.7
179	41246	1.5	15.9003	0.9	0.9297	2.4	0.1072	2.3	0.93	656.5	14.1	667.5	11.9	704.6	18.9	656.5	14.1	93.2
268	342880	2.5	16.0328	0.8	0.9226	2.3	0.1073	2.2	0.94	656.9	13.7	663.7	11.4	686.9	16.7	656.9	13.7	95.6
343	47003	8.8	16.4294	0.7	0.9004	2.0	0.1073	1.8	0.93	657.0	11.3	651.9	9.4	634.5	15.4	657.0	11.3	103.5
331	92009	7.6	16.0855	1.0	0.9217	2.3	0.1075	2.1	0.90	658.4	13.1	663.3	11.4	679.9	21.7	658.4	13.1	96.8
135	38107	6.6	15.6185	1.7	0.9502	3.3	0.1076	2.8	0.86	659.0	17.6	678.2	16.2	742.5	35.6	659.0	17.6	88.8
368	44894	7.4	15.9201	0.8	0.9357	2.5	0.1080	2.3	0.95	661.4	14.7	670.7	12.1	701.9	16.5	661.4	14.7	94.2
858	89604	47.8	16.2470	0.9	0.9184	2.2	0.1082	2.0	0.91	662.4	12.7	661.5	10.8	658.5	19.7	662.4	12.7	100.6
337	135319	4.0	16.2167	0.8	0.9242	1.9	0.1087	1.7	0.90	665.2	10.8	664.6	9.2	662.5	17.2	665.2	10.8	100.4
300	21920	2.8	16.1945	0.7	0.9304	2.2	0.1093	2.1	0.95	668.6	13.5	667.9	10.9	665.5	15.1	668.6	13.5	100.5
237	44704	2.7	16.0398	0.7	0.9458	2.3	0.1100	2.2	0.95	672.9	13.8	675.9	11.2	686.0	15.2	672.9	13.8	98.1
241	64135	2.6	15.6139	0.9	0.9887	2.4	0.1120	2.2	0.92	684.1	14.0	698.1	11.9	743.1	19.7	684.1	14.0	92.1
137	79901	3.6	15.9806	0.9	0.9716	3.0	0.1126	2.9	0.95	687.9	18.7	689.3	15.1	693.9	19.7	687.9	18.7	99.1
193	29622	4.6	15.3035	0.7	1.0179	2.4	0.1130	2.3	0.95	690.0	14.9	712.9	12.2	785.4	15.3	690.0	14.9	87.9
367	64869	3.4	15.4210	0.8	1.0443	1.9	0.1168	1.7	0.90	712.1	11.5	726.1	9.9	769.3	17.7	712.1	11.5	92.6
377	19479	3.4	15.6166	0.6	1.0547	1.7	0.1195	1.6	0.93	727.4	11.2	731.2	9.1	742.8	13.6	727.4	11.2	97.9
246	48468	2.9	15.1515	0.9	1.1048	1.9	0.1214	1.7	0.89	738.6	11.7	755.7	10.1	806.4	18.2	738.6	11.7	91.6
84	37389	2.4	14.5272	1.2	1.1535	3.1	0.1215	2.9	0.93	739.4	20.1	778.9	16.9	893.9	24.4	739.4	20.1	82.7
213	34143	2.6	14.6829	0.7	1.1625	1.9	0.1238	1.7	0.93	752.4	12.3	783.1	10.1	871.8	14.0	752.4	12.3	86.3
224	72121	2.8	14.5186	0.8	1.2125	2.3	0.1277	2.2	0.95	774.6	16.0	806.3	12.9	895.1	15.6	774.6	16.0	86.5
251	47463	8.9	14.7823	0.9	1.1955	3.2	0.1282	3.1	0.96	777.4	22.4	798.5	17.7	857.8	19.2	777.4	22.4	90.6
776	134458	4.1	15.2705	0.8	1.1695	2.0	0.1295	1.8	0.92	785.2	13.4	786.4	10.8	790.0	16.3	785.2	13.4	99.4
433	2678655	11.1	14.7969	1.0	1.2377	5.6	0.1328	5.5	0.98	804.0	41.6	817.8	31.5	855.8	21.4	804.0	41.6	93.9
211	39243	3.3	14.5934	0.8	1.2672	2.1	0.1341	2.0	0.92	811.3	14.9	831.1	12.0	884.5	17.1	811.3	14.9	91.7
653	350859	290.1	14.1159	0.7	1.4170	2.0	0.1451	1.9	0.94	873.3	15.8	896.1	12.2	952.9	13.8	952.9	13.8	91.6
46	36115	1.9	14.1006	1.2	1.4719	3.5	0.1505	3.2	0.94	903.9	27.4	918.9	20.9	955.1	24.8	955.1	24.8	94.6
352	474678	18.4	14.0620	0.9	1.4019	3.0	0.1430	2.9	0.96	861.5	23.5	889.7	18.0	960.7	17.4	960.7	17.4	89.7
108	34349	2.0	14.0343	0.8	1.3771	2.6	0.1402	2.5	0.96	845.6	19.8	879.2	15.4	964.7	15.7	964.7	15.7	87.7
384	38701	3.2	14.0120	0.9	1.4956	2.9	0.1520	2.7	0.95	912.1	23.1	928.6	17.4	968.0	18.1	968.0	18.1	94.2
318	4111476	2.0	13.9974	0.8	1.6169	2.1	0.1642	1.9	0.93	979.8	17.7	976.8	13.1	970.1	15.9	970.1	15.9	101.0
257	68981	2.9	13.9562	0.7	1.5385	2.2	0.1557	2.1	0.95	933.0	18.6	945.9	13.8	976.1	13.6	976.1	13.6	95.6
35	4481	2.1	13.9141	1.5	1.6379	5.5	0.1653	5.3	0.96	986.1	48.2	984.9	34.5	982.3	30.2	982.3	30.2	100.4
385	248700	8.1	13.9065	0.5	1.6738	2.0	0.1688	1.9	0.96	1005.6	18.0	998.6	12.8	983.4	11.1	983.4	11.1	102.3
161	46978	3.2	13.8891	0.7	1.5520	2.7	0.1563	2.6	0.96	936.4	22.6	951.3	16.6	985.9	15.2	985.9	15.2	95.0
416	173672	4.0	13.8775	0.8	1.5936	2.7	0.1604	2.5	0.95	959.0	22.4	967.7	16.6	987.6	17.1	987.6	17.1	97.1

213	41535	3.0	13.8690	0.8	1.6594	2.5	0.1669	2.4	0.95	995.1	21.8	993.1	15.7	988.9	15.4	988.9	15.4	100.6
458	170569	3.5	13.8289	0.8	1.7128	2.1	0.1718	1.9	0.92	1021.9	17.8	1013.3	13.2	994.7	16.7	994.7	16.7	102.7
329	167046	3.0	13.7704	0.8	1.6464	2.1	0.1644	2.0	0.93	981.4	18.2	988.2	13.5	1003.3	15.4	1003.3	15.4	97.8
538	241861	2.5	13.7489	0.6	1.7596	1.9	0.1755	1.7	0.94	1042.2	16.7	1030.7	12.0	1006.5	13.0	1006.5	13.0	103.5
240	95100	8.9	13.7399	0.8	1.7040	2.6	0.1698	2.5	0.95	1011.1	23.1	1010.0	16.5	1007.8	15.8	1007.8	15.8	100.3
336	422545	6.0	13.6931	0.8	1.7343	2.3	0.1722	2.2	0.94	1024.4	20.9	1021.3	15.1	1014.8	16.3	1014.8	16.3	101.0
99	41530	2.2	13.6847	0.8	1.6754	2.5	0.1663	2.3	0.95	991.6	21.5	999.2	15.7	1016.0	15.2	1016.0	15.2	97.6
199	20141	2.4	13.6609	0.8	1.7530	2.5	0.1737	2.4	0.95	1032.3	22.8	1028.3	16.3	1019.5	16.2	1019.5	16.2	101.3
339	293998	2.4	13.6592	0.7	1.6860	2.6	0.1670	2.5	0.96	995.7	23.1	1003.3	16.6	1019.8	14.5	1019.8	14.5	97.6
358	244635	10.6	13.6589	0.8	1.6094	2.3	0.1594	2.2	0.94	953.6	19.6	973.9	14.6	1019.8	15.6	1019.8	15.6	93.5
351	39022	1.9	13.6202	0.6	1.7013	2.3	0.1681	2.2	0.96	1001.4	20.6	1009.0	14.8	1025.6	12.9	1025.6	12.9	97.6
186	218305	2.3	13.6195	0.9	1.6824	2.2	0.1662	2.0	0.92	991.1	18.6	1001.9	14.0	1025.7	17.5	1025.7	17.5	96.6
153	106288	3.9	13.6128	0.9	1.5789	2.8	0.1559	2.6	0.94	933.9	22.9	961.9	17.4	1026.7	18.6	1026.7	18.6	91.0
213	51562	3.6	13.6124	0.8	1.7463	2.5	0.1724	2.3	0.94	1025.3	21.8	1025.8	15.8	1026.7	17.2	1026.7	17.2	99.9
291	57504	5.2	13.6074	0.8	1.7218	2.2	0.1699	2.0	0.92	1011.7	19.0	1016.7	14.1	1027.5	17.1	1027.5	17.1	98.5
349	106317	14.5	13.6041	0.6	1.7568	1.8	0.1733	1.7	0.93	1030.5	16.1	1029.7	11.7	1028.0	13.1	1028.0	13.1	100.2
100	19673	2.2	13.5836	0.6	1.7892	1.9	0.1763	1.9	0.95	1046.6	18.0	1041.6	12.7	1031.0	11.8	1031.0	11.8	101.5
76	17366	1.8	13.5817	0.9	1.8099	2.8	0.1783	2.7	0.95	1057.6	26.2	1049.0	18.5	1031.3	17.2	1031.3	17.2	102.5
147	25622	3.9	13.5728	0.9	1.7496	2.1	0.1722	1.9	0.91	1024.4	18.0	1027.0	13.5	1032.6	17.2	1032.6	17.2	99.2
451	143852	2.9	13.4930	0.6	1.7316	1.6	0.1695	1.5	0.93	1009.1	14.0	1020.4	10.4	1044.5	11.9	1044.5	11.9	96.6
362	71009	2.8	13.4856	0.7	1.7098	2.4	0.1672	2.3	0.96	996.9	21.5	1012.2	15.6	1045.7	14.1	1045.7	14.1	95.3
360	199256	3.8	13.4841	0.6	1.8508	2.2	0.1810	2.1	0.97	1072.5	21.1	1063.7	14.6	1045.9	11.3	1045.9	11.3	102.5
206	179801	3.5	13.4817	0.8	1.6812	2.6	0.1644	2.5	0.95	981.1	22.8	1001.4	16.8	1046.2	16.2	1046.2	16.2	93.8
494	40832	1.7	13.4581	0.5	1.7774	2.2	0.1735	2.1	0.97	1031.3	20.4	1037.2	14.3	1049.8	10.8	1049.8	10.8	98.2
200	39349	1.9	13.4434	0.8	1.7084	2.7	0.1666	2.6	0.96	993.2	23.7	1011.7	17.3	1052.0	15.8	1052.0	15.8	94.4
165	44230	3.3	13.4404	0.6	1.8145	2.2	0.1769	2.1	0.96	1049.9	20.4	1050.7	14.3	1052.4	12.4	1052.4	12.4	99.8
81	569111	2.5	13.4005	0.8	1.7069	3.2	0.1659	3.0	0.96	989.5	28.0	1011.1	20.2	1058.4	16.7	1058.4	16.7	93.5
212	103101	3.0	13.3999	0.7	1.7698	2.3	0.1720	2.1	0.94	1023.1	20.2	1034.4	14.7	1058.5	15.0	1058.5	15.0	96.7
190	144617	4.2	13.3992	0.8	1.8072	2.1	0.1756	2.0	0.93	1043.0	19.1	1048.1	13.9	1058.6	15.3	1058.6	15.3	98.5
76	65995	5.4	13.3845	0.9	1.7391	3.0	0.1688	2.8	0.95	1005.6	26.3	1023.1	19.2	1060.8	18.9	1060.8	18.9	94.8
153	315188	2.3	13.3806	0.6	1.8215	1.9	0.1768	1.8	0.94	1049.3	17.1	1053.2	12.3	1061.4	12.9	1061.4	12.9	98.9
355	51987	8.1	13.3478	0.6	1.7007	2.0	0.1646	1.9	0.95	982.5	17.5	1008.8	12.9	1066.3	12.7	1066.3	12.7	92.1
162	156436	4.3	13.3046	0.7	1.8204	2.2	0.1757	2.1	0.95	1043.2	20.0	1052.8	14.3	1072.9	13.9	1072.9	13.9	97.2
181	54324	1.1	13.2973	0.9	1.6325	2.4	0.1574	2.2	0.93	942.6	19.4	982.8	14.9	1074.0	17.4	1074.0	17.4	87.8
60	22379	1.7	13.2669	1.1	1.6731	3.1	0.1610	2.9	0.93	962.3	26.0	998.4	19.8	1078.5	22.3	1078.5	22.3	89.2
186	44022	2.9	13.1960	0.7	1.8962	2.2	0.1815	2.1	0.95	1075.1	20.3	1079.8	14.3	1089.3	13.0	1089.3	13.0	98.7
139	28132	3.2	13.1738	0.7	1.9028	2.9	0.1818	2.8	0.97	1076.8	27.6	1082.1	19.1	1092.6	13.4	1092.6	13.4	98.6
372	119894	7.5	13.1633	0.9	1.9069	2.6	0.1821	2.5	0.94	1078.2	24.7	1083.5	17.6	1094.3	17.9	1094.3	17.9	98.5
148	19230001	1.6	13.1509	0.8	1.8859	2.7	0.1799	2.6	0.96	1066.3	25.5	1076.1	18.0	1096.1	15.9	1096.1	15.9	97.3
325	39324	3.1	13.0099	0.7	2.0519	2.0	0.1936	1.8	0.93	1140.9	19.1	1132.9	13.4	1117.7	14.7	1117.7	14.7	102.1
227	129492	3.4	12.9650	0.6	1.9654	2.1	0.1848	2.1	0.96	1093.2	20.6	1103.7	14.3	1124.6	11.4	1124.6	11.4	97.2

227	129492	3.4	12.9650	0.6	1.9654	2.1	0.1848	2.1	0.96	1093.2	20.6	1103.7	14.3	1124.6	11.4	1124.6	11.4	97.2
154	132337	1.8	12.9463	0.8	1.9710	2.7	0.1851	2.6	0.95	1094.6	25.9	1105.7	18.2	1127.4	16.1	1127.4	16.1	97.1
65	64977	2.3	12.9202	0.8	1.8125	3.1	0.1698	3.0	0.96	1011.2	28.0	1050.0	20.4	1131.5	16.8	1131.5	16.8	89.4
75	36174	1.5	12.9054	1.1	1.8028	3.6	0.1687	3.5	0.96	1005.2	32.4	1046.5	23.8	1133.7	21.3	1133.7	21.3	88.7
77	13472	2.6	12.8716	0.9	1.8939	2.6	0.1768	2.4	0.93	1049.5	23.5	1079.0	17.3	1139.0	18.4	1139.0	18.4	92.1
60	9769	2.9	12.7942	0.8	1.9703	3.1	0.1828	3.0	0.96	1082.4	29.8	1105.4	20.9	1150.9	16.4	1150.9	16.4	94.0
52	63135	1.8	12.7938	0.8	1.9073	3.2	0.1770	3.1	0.97	1050.5	29.9	1083.7	21.2	1151.0	16.2	1151.0	16.2	91.3
374	866828	1.6	12.5992	0.5	2.1904	2.1	0.2002	2.1	0.97	1176.2	22.3	1178.0	14.9	1181.4	10.4	1181.4	10.4	99.6
101	14483	5.8	12.4667	0.8	2.0274	3.5	0.1833	3.4	0.97	1085.1	34.1	1124.8	23.8	1202.3	15.8	1202.3	15.8	90.3
46	17142	1.0	12.4472	1.1	2.1116	3.9	0.1906	3.8	0.96	1124.8	38.9	1152.6	27.1	1205.3	21.7	1205.3	21.7	93.3
54	22696	2.3	11.8694	1.0	2.4172	4.2	0.2081	4.0	0.97	1218.6	44.9	1247.7	30.0	1298.3	19.8	1298.3	19.8	93.9
103	2345793	3.0	11.6959	0.6	2.5704	3.1	0.2180	3.0	0.98	1271.5	34.9	1292.3	22.6	1326.9	12.0	1326.9	12.0	95.8
222	70810	2.2	11.6887	0.7	2.6659	2.3	0.2260	2.2	0.96	1313.5	26.5	1319.1	17.2	1328.1	12.7	1328.1	12.7	98.9
172	26433	2.8	11.6832	0.6	2.3304	2.0	0.1975	1.9	0.95	1161.7	20.7	1221.6	14.5	1329.0	12.3	1329.0	12.3	87.4
72	1723652	1.6	11.5906	0.7	2.6424	3.6	0.2221	3.6	0.98	1293.1	41.7	1312.5	26.7	1344.4	13.9	1344.4	13.9	96.2
187	42155	1.9	11.3359	0.6	2.6608	2.6	0.2188	2.5	0.97	1275.3	28.9	1317.6	19.0	1387.2	12.4	1387.2	12.4	91.9
324	41187	1.8	11.2436	0.6	2.7860	1.8	0.2272	1.7	0.94	1319.7	20.4	1351.8	13.6	1402.8	12.1	1402.8	12.1	94.1
128	41378	2.4	9.2090	0.7	4.5251	2.4	0.3022	2.3	0.96	1702.4	34.4	1735.6	20.0	1775.9	12.8	1775.9	12.8	95.9
207	188962	2.8	9.1837	0.4	4.6822	1.6	0.3119	1.5	0.97	1749.9	23.6	1764.1	13.4	1780.9	7.6	1780.9	7.6	98.3
126	36755	2.9	9.1558	1.0	4.2334	3.6	0.2811	3.5	0.96	1597.0	49.0	1680.5	29.6	1786.4	18.2	1786.4	18.2	89.4
151	2814810	2.0	9.0619	0.6	4.7306	2.9	0.3109	2.9	0.98	1745.2	43.6	1772.7	24.4	1805.2	10.3	1805.2	10.3	96.7
204	39481	2.1	8.9694	1.2	3.9436	3.7	0.2565	3.5	0.94	1472.1	46.1	1622.7	30.1	1823.8	22.4	1823.8	22.4	80.7
230	91441	1.9	5.5785	0.7	12.0296	2.5	0.4867	2.4	0.96	2556.4	50.9	2606.7	23.5	2646.0	11.1	2646.0	11.1	96.6
318	922569	2.4	5.5436	0.5	11.7754	2.3	0.4734	2.3	0.98	2498.6	47.3	2586.7	21.9	2656.4	8.5	2656.4	8.5	94.1

Brazitis Nunatak Sandstone

U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
1838	298173	3.8	16.7432	0.8	0.7792	2.2	0.0946	2.1	0.93	582.8	11.5	585.0	9.9	593.7	17.3	582.8	11.5	98.2
628	118849	16.5	14.8648	0.8	1.1640	2.3	0.1255	2.2	0.95	762.1	15.9	783.8	12.8	846.2	15.7	762.1	15.9	90.1
834	240229	26.9	16.9328	0.7	0.7560	2.2	0.0928	2.1	0.94	572.3	11.4	571.7	9.7	569.2	16.0	572.3	11.4	100.5
339	685670	4.4	4.8229	0.6	13.1971	2.1	0.4616	2.0	0.96	2446.7	41.3	2693.8	19.9	2884.9	9.2	2884.9	9.2	84.8
765	3028856	1.5	13.2915	0.5	1.9065	2.1	0.1838	2.0	0.97	1087.6	20.1	1083.3	13.8	1074.8	10.9	1074.8	10.9	101.2
251	3789	2.3	11.9572	3.1	1.4010	3.9	0.1215	2.4	0.61	739.2	16.7	889.4	23.2	1284.0	60.4	1284.0	60.4	57.6
1282	152421	4.0	16.4760	0.6	0.8657	2.1	0.1034	2.0	0.95	634.6	11.8	633.2	9.7	628.4	13.8	634.6	11.8	101.0
715	651831	1.4	16.7035	0.6	0.7757	1.7	0.0940	1.6	0.93	579.0	8.6	583.0	7.4	598.8	13.5	579.0	8.6	96.7
173	188886	2.3	15.4753	1.1	1.0002	3.4	0.1123	3.2	0.95	685.9	21.1	703.9	17.4	761.9	23.5	685.9	21.1	90.0
466	111316	4.3	16.8604	0.6	0.7921	2.1	0.0969	2.0	0.96	596.0	11.6	592.3	9.5	578.5	12.9	596.0	11.6	103.0
185	68081	1.1	12.8216	0.9	2.0488	2.5	0.1905	2.4	0.94	1124.2	24.3	1131.9	17.1	1146.7	17.1	1146.7	17.1	98.0
49	3078	4.6	17.5831	1.4	0.8180	4.2	0.1043	4.0	0.95	639.7	24.4	606.9	19.4	486.6	30.1	639.7	24.4	131.5
15	3029	1.8	18.5603	3.0	0.7207	6.8	0.0970	6.1	0.90	596.9	34.9	551.1	29.0	366.0	67.3	596.9	34.9	163.1
446	49227	3.2	16.6461	0.8	0.8285	2.3	0.1000	2.2	0.94	614.5	12.7	612.8	10.6	606.2	17.0	614.5	12.7	101.4
501	52484	5.8	16.6888	0.7	0.8829	2.0	0.1069	1.8	0.93	654.5	11.5	642.6	9.5	600.7	15.7	654.5	11.5	109.0
332	40029	2.3	16.1515	0.9	0.9407	2.5	0.1102	2.4	0.94	673.9	15.1	673.3	12.4	671.1	18.8	673.9	15.1	100.4
296	26722	3.9	17.3773	0.8	0.6782	2.6	0.0855	2.5	0.95	528.7	12.5	525.7	10.6	512.5	18.5	528.7	12.5	103.2
31	5885	1.2	7.5461	9.2	3.0648	10.7	0.1677	5.5	0.52	999.6	51.2	1423.9	82.3	2131.6	161.3	2131.6	161.3	46.9
606	56376	2.6	13.0973	0.7	1.9042	2.2	0.1809	2.1	0.94	1071.8	20.3	1082.5	14.5	1104.3	14.5	1104.3	14.5	97.1
139	6555	2.3	17.7370	0.9	0.6800	3.7	0.0875	3.6	0.97	540.6	18.8	526.8	15.4	467.4	20.9	540.6	18.8	115.7
1229	126824	22.5	17.2501	0.6	0.7096	1.6	0.0888	1.4	0.92	548.3	7.6	544.5	6.6	528.7	13.2	548.3	7.6	103.7
216	353160	1.7	16.6863	0.8	0.8169	2.4	0.0989	2.3	0.94	607.7	13.2	606.3	11.1	601.0	18.0	607.7	13.2	101.1
76	7843	2.3	17.5875	1.3	0.6864	3.4	0.0876	3.1	0.92	541.0	16.1	530.6	13.9	486.1	28.9	541.0	16.1	111.3
498	114819	5.7	16.9243	0.7	0.7815	2.5	0.0959	2.4	0.96	590.5	13.5	586.4	11.1	570.3	15.1	590.5	13.5	103.5
271	113929	2.4	13.7152	0.7	1.7396	2.4	0.1730	2.3	0.95	1028.8	21.8	1023.3	15.5	1011.5	14.9	1011.5	14.9	101.7
423	99434	3.2	14.7903	1.0	1.1049	2.9	0.1185	2.7	0.94	722.0	18.6	755.7	15.4	856.7	19.9	722.0	18.6	84.3
853	251800	3.9	16.7162	0.7	0.7806	1.9	0.0946	1.7	0.93	582.9	9.7	585.8	8.3	597.2	14.6	582.9	9.7	97.6
300	81946	1.9	14.3442	0.7	1.3310	2.4	0.1385	2.4	0.96	836.0	18.4	859.3	14.2	920.0	14.1	836.0	18.4	90.9
150	57576	2.6	17.0943	1.1	0.7197	3.0	0.0892	2.8	0.93	550.9	14.6	550.5	12.6	548.5	23.5	550.9	14.6	100.4
242	39775	3.0	16.4821	0.9	0.8795	2.7	0.1051	2.6	0.95	644.4	15.9	640.7	13.0	627.6	19.0	644.4	15.9	102.7
128	63717	0.8	12.5613	1.0	2.1681	2.7	0.1975	2.5	0.93	1162.0	26.3	1170.9	18.6	1187.4	20.0	1187.4	20.0	97.9
501	117116	2.4	17.1276	0.9	0.7060	2.3	0.0877	2.2	0.93	541.9	11.3	542.4	9.8	544.3	18.8	541.9	11.3	99.6
126	4250	1.2	18.2919	1.1	0.6260	3.6	0.0831	3.4	0.95	514.3	17.0	493.6	14.1	398.7	24.0	514.3	17.0	129.0
688	157844	9.7	17.2493	0.8	0.6826	2.1	0.0854	1.9	0.92	528.3	9.6	528.4	8.5	528.8	17.6	528.3	9.6	99.9
1699	194876	22.9	16.9499	0.7	0.7382	2.3	0.0907	2.2	0.95	559.9	12.0	561.3	10.1	567.0	15.7	559.9	12.0	98.8
346	47548	2.6	14.9389	1.0	1.1510	3.0	0.1247	2.8	0.95	757.6	20.4	777.7	16.3	835.9	20.2	757.6	20.4	90.6
838	551813	11.6	16.6524	0.8	0.8023	1.9	0.0969	1.8	0.92	596.2	10.0	598.1	8.7	605.4	16.5	596.2	10.0	98.5
562	103985	2.9	16.7761	0.9	0.7565	2.2	0.0920	2.1	0.92	567.6	11.2	572.0	9.8	589.4	18.7	567.6	11.2	96.3
294	13958	7.0	17.4913	1.3	0.7065	2.6	0.0896	2.3	0.87	553.4	11.9	542.7	10.9	498.1	28.3	553.4	11.9	111.1
309	36081	3.2	16.6224	1.0	0.7669	3.6	0.0924	3.5	0.96	570.0	19.1	578.0	16.0	609.3	21.1	570.0	19.1	93.5
79	13591	2.1	16.8965	1.3	0.8128	4.6	0.0996	4.4	0.96	612.1	25.6	604.0	20.8	573.9	28.0	612.1	25.6	106.7
1472	316090	12.7	17.1524	0.7	0.6854	2.0	0.0853	1.8	0.93	527.4	9.2	530.0	8.1	541.1	16.2	527.4	9.2	97.5
537	361413	5.8	4.9355	0.7	15.1179	2.4	0.5412	2.2	0.95	2788.3	50.8	2822.7	22.5	2847.4	11.8	2847.4	11.8	97.9
354	43203	5.2	16.9346	0.8	0.7343	2.4	0.0902	2.2	0.93	556.6	11.7	559.1	10.1	569.0	18.3	556.6	11.7	97.8
101	12634	0.5	17.2781	1.1	0.6847	3.7	0.0858	3.6	0.96	530.6	18.2	529.6	15.4	525.1	23.4	530.6	18.2	101.1
395	93138	3.8	16.8935	0.8	0.7756	2.4	0.0950	2.3	0.94	585.2	12.8	582.9	10.8	574.3	17.6	585.2	12.8	101.9
36	10610	0.7	15.4095	1.7	1.1373	4.9	0.1271	4.5	0.93	771.3	33.1	771.2	26.3	770.9	36.4	771.3	33.1	100.1
262	100606	2.8	13.5783	1.0	1.6695	3.1	0.1644	2.9	0.95	981.3	26.4	997.0	19.4	1031.8	19.3	1031.8	19.3	95.1
137	18053	0.5	17.1248	1.2	0.6848	3.4	0.0851	3.2	0.94	526.2	16.3	529.7	14.1	544.6	25.3	526.2	16.3	96.6
2448	912878	27.8	16.7152	0.6	0.7519	1.9	0.0912	1.8	0.94	562.4	9.4	569.3	8.1	597.3	14.0	562.4	9.4	94.2
925	9138546	4.9	16.6601	0.7	0.8044	2.2	0.0972	2.1	0.95	598.0	12.1	599.3	10.1	604.4	14.6	598.0	12.1	98.9
240	25992	2.5	16.5909	1.0	0.8016	2.6	0.0965	2.3	0.91	593.6	13.3	597.7	11.6	613.4	22.4	593.6	13.3	96.8
607	136345	3.6	16.9688	0.8	0.7178	2.3	0.0883	2.2	0.94	545.7	11.4	549.4	9.9	564.6	17.9	545.7	11.4	96.7
327	44046	3.9	16.9086	1.0	0.7246	2.6	0.0889	2.4	0.92	548.8	12.5	553.4	11.0	572.3	21.9	548.8	12.5	95.9
1358	205551	5.9	16.5814	0.8	0.8331	1.9	0.1002	1.8	0.92	615.5	10.4	615.3	8.9	614.6	16.6	615.5	10.4	100.1
275	20869	0.9	16.2775	0.9	0.8960	2.2	0.1058	2.0	0.91	648.2	12.1	649.6	10.3	654.5	19.0	648.2	12.1	99.0
462	124169	5.5	16.7991	0.7	0.7561	1.9	0.0921	1.8	0.93	568.0	9.8	571.7	8.4	586.4	15.3	568.0	9.8	96.9
95	21954	2.3	17.2569	1.4	0.7009	3.5	0.0877	3.3	0.92	542.0	17.0	539.3	14.8	527.8	30.2	542.0	17.0	102.7
49	40711	1.2	17.0160	2.0	0.7286	4.6	0.0899	4.1	0.90	555.1	22.0	555.8	19.7	558.5	44.4	555.1	22.0	99.4
56	9485	3.2	17.7498	1.8	0.6885	4.8	0.0886	4.5	0.93	547.4	23.5	531.9	20.0	465.7	39.5	547.4	23.5	117.5
636	55598	1.9	16.5558	0.8	0.7975	2.6	0.0958	2.4	0.95	589.5	13.7	595.4	11.5	618.0	17.8	589.5	13.7	95.4
1232	938804	17.0	16.7244	0.6	0.8108	1.6	0.0983	1.5	0.92	604.7	8.5	602.9	7.2	596.1	13.6	604.7	8.5	101.4
468	196547	2.4	16.8777	0.7	0.7666	2.0	0.0938	1.8	0.93	578.2	10.1	577.8	8.6	576.3	15.2	578.2	10.1	100.3
480	90472	2.9	13.7045	0.7	1.6309	2.4	0.1621	2.3	0.96	968.4	20.6	982.2	15.1	1013.1	14.2	1013.1	14.2	95.6
156	23783	2.1	16.9643	1.2	0.7563	3.9	0.0931	3.8	0.95	573.6	20.6	571.9	17.3	565.1	26.8	573.6	20.6	101.5
46	9715	2.5	13.7729	1.8	1.8576	5.1	0.1856	4.7	0.93	1097.3	47.7	1066.1	33.4	1003.0	36.6	1003.0	36.6	109.4
2422	844209	22.6	16.2987	0.7	0.8771	1.9	0.1037	1.7	0.93	635.9	10.6	639.4	8.9	651.7	14.9	635.9	10.6	97.6
189	65450	2.1	13.6615	0.8	1.6535	2.3	0.1638	2.1	0.94	978.0	19.3	990.9	14.2	1019.4	15.2	1019.4	15.2	95.9
375	121275	4.3	14.8284	0.7	1.1597	2.0	0.1247	1.8	0.93	757.7	13.0	781.8	10.7	851.3	14.9	757.7	13.0	89.0
438	57809	3.0	16.9438	0.8	0.7342	2.0	0.0902	1.9	0.93	556.9	10.1	559.0	8.8	567.8	16.8	556.9	10.1	98.1
455	95158	5.2	16.5186	0.7	0.8147	1.8	0.0976	1.7	0.91	600.3	9.5	605.1	8.3	622.8	16.0	600.3	9.5	96.4
222	183957898	2.9	17.2927	0.8	0.6806	2.4	0.0854	2.2	0.95	528.0	11.3	527.1	9.7	523.2	16.7	528.0	11.3	100.9
1093	362684	5.5	16.3367	0.6	0.8790	2.3	0.1041	2.2	0.96	638.7	13.2	640.4	10.7	646.7	12.7	638.7	13.2	98.8
727	281908	10.2	16.6217	0.8	0.8052	2.2	0.0971	2.0	0.93	597.2	11.4	599.8	9.8	609.4	17.6	597.2	11.4	98.0
279	89314	3.1	15.2853	0.7	1.1893	2.2	0.1318	2.1	0.95	798.4	15.7	795.6	12.2	787.9	14.8	798.4	15.7	101.3
645	168324	3.3	14.7161	0.7	1.2233	2.1	0.1306	2.0	0.94	791.1	14.8	811.3	11.8	867.1	15.3	791.1	14.8	91.2
385	1411884	1.4	16.8211	0.8	0.8133	2.6	0.0992	2.5	0.95	609.8	14.4	604.3	11.9	583.6	18.1	609.8	14.4	104.5
400	113898	2.7	14.3453	0.8	1.3633	2.5	0.1418	2.4	0.95	855.1	19.0	873.3	14.6	919.8	15.5	855.1	19.0	93.0

2547	181845	5.6	17.0134	0.9	0.7108	1.7	0.0877	1.4	0.86	542.0	7.5	545.2	7.1	558.8	18.8	542.0	7.5	97.0
879	52899	5.9	16.6898	0.8	0.7974	2.1	0.0965	1.9	0.93	594.0	11.0	595.3	9.4	600.5	16.7	594.0	11.0	98.9
60	56947	0.5	5.1433	0.6	14.2744	3.3	0.5325	3.2	0.98	2751.8	72.7	2768.1	31.4	2780.0	10.4	2780.0	10.4	99.0
440	17449	6.7	6.8071	1.4	6.4909	2.3	0.3205	1.8	0.79	1792.0	28.2	2044.7	20.0	2310.2	23.8	2310.2	23.8	77.6
642	369597	8.5	16.7825	0.7	0.7872	2.1	0.0958	2.0	0.94	589.8	11.3	589.6	9.6	588.6	16.1	589.8	11.3	100.2
253	109776	2.9	9.1469	0.7	4.7675	2.9	0.3163	2.8	0.97	1771.5	43.2	1779.2	24.2	1788.2	13.6	1788.2	13.6	99.1
340	21959	4.3	15.9787	0.8	0.9547	2.5	0.1106	2.4	0.94	676.4	15.1	680.5	12.4	694.1	17.4	676.4	15.1	97.5
257	175517	2.3	16.9698	0.9	0.7261	2.7	0.0894	2.6	0.94	551.8	13.5	554.3	11.6	564.4	19.5	551.8	13.5	97.8
161	103159	23.2	17.0140	0.9	0.7320	2.6	0.0903	2.4	0.94	557.5	13.0	557.7	11.2	558.8	19.8	557.5	13.0	99.8
184	45812	3.7	16.7927	1.0	0.8187	3.2	0.0997	3.0	0.95	612.7	17.5	607.3	14.4	587.3	21.6	612.7	17.5	104.3
771	987486	6.8	4.2920	1.1	17.3585	2.1	0.5403	1.8	0.84	2784.9	40.3	2954.9	20.3	3072.7	18.1	3072.7	18.1	90.6
609	287587	3.9	4.8749	0.8	14.7412	2.2	0.5212	2.1	0.94	2704.2	45.9	2798.7	21.1	2867.5	12.8	2867.5	12.8	94.3
284	533647	1.1	16.5424	0.9	0.8375	2.5	0.1005	2.3	0.94	617.2	13.6	617.8	11.4	619.7	18.6	617.2	13.6	99.6
1076	3139147	8.5	17.0098	0.7	0.7517	2.0	0.0927	1.9	0.94	571.7	10.4	569.2	8.8	559.3	14.9	571.7	10.4	102.2
1649	886668	62.0	8.0778	0.6	4.8372	1.8	0.2834	1.6	0.94	1608.4	23.3	1791.4	14.7	2011.6	10.9	2011.6	10.9	80.0
1525	99487	27.1	16.7839	0.7	0.7396	1.8	0.0900	1.7	0.92	555.7	8.8	562.2	7.8	588.4	14.9	555.7	8.8	94.5
192	24697	2.2	17.5445	1.1	0.6600	2.9	0.0840	2.7	0.92	519.9	13.2	514.6	11.6	491.4	24.3	519.9	13.2	105.8
785	343185	6.2	16.6324	1.3	0.8617	3.5	0.1039	3.2	0.93	637.5	19.7	631.0	16.4	608.0	27.4	637.5	19.7	104.8
1102	146597	3.8	16.5844	0.6	0.8057	2.1	0.0969	2.0	0.96	596.3	11.7	600.0	9.7	614.2	12.8	596.3	11.7	97.1
413	55621	2.6	16.6824	0.7	0.8267	2.0	0.1000	1.9	0.94	614.6	11.3	611.8	9.4	601.5	14.4	614.6	11.3	102.2
420	54975	14.0	17.0251	0.8	0.7522	2.7	0.0929	2.5	0.95	572.6	13.9	569.5	11.7	557.4	18.5	572.6	13.9	102.7
355	55077	1.6	16.7279	0.9	0.7809	2.5	0.0947	2.3	0.94	583.5	13.0	586.0	11.1	595.6	18.6	583.5	13.0	98.0
414	337359	5.4	16.7180	1.0	0.8148	2.7	0.0988	2.5	0.93	607.3	14.7	605.1	12.4	596.9	21.3	607.3	14.7	101.7
147	156106	8.9	16.4865	1.1	0.8392	3.1	0.1003	2.9	0.93	616.4	17.2	618.7	14.6	627.0	24.7	616.4	17.2	98.3
1860	88271	6.3	16.0079	0.6	0.9361	1.5	0.1087	1.3	0.91	665.1	8.5	670.9	7.2	690.2	13.1	665.1	8.5	96.4
379	46097	2.5	16.2331	0.7	0.9592	2.5	0.1129	2.3	0.95	689.7	15.3	682.9	12.2	660.4	15.9	689.7	15.3	104.4
576	173031	2.7	13.2821	0.6	1.8579	1.8	0.1790	1.7	0.93	1061.4	16.5	1066.3	11.9	1076.2	13.0	1076.2	13.0	98.6
55	13286	3.4	17.5747	1.7	0.7158	4.0	0.0912	3.6	0.90	562.9	19.3	548.2	16.8	487.7	38.2	562.9	19.3	115.4
824	98840	2.1	16.8096	0.6	0.8013	2.1	0.0977	2.0	0.96	600.9	11.3	597.6	9.3	585.1	12.5	600.9	11.3	102.7
152	37232	2.3	17.2561	0.9	0.6787	2.6	0.0849	2.4	0.93	525.5	12.1	526.0	10.5	527.9	19.9	525.5	12.1	99.6
364	36674	4.1	16.4905	0.9	0.8078	2.3	0.0966	2.2	0.93	594.5	12.3	601.2	10.5	626.5	18.4	594.5	12.3	94.9
764	87211	5.4	16.1754	0.7	0.9555	2.1	0.1121	2.0	0.95	684.9	12.9	681.0	10.4	667.9	14.4	684.9	12.9	102.5
427	94876	3.4	15.3260	0.7	1.0454	3.3	0.1162	3.2	0.98	708.7	21.8	726.6	17.3	782.3	15.1	708.7	21.8	90.6
145	20917	1.2	16.8942	1.0	0.7077	2.8	0.0867	2.7	0.94	536.1	13.8	543.4	12.0	574.2	21.2	536.1	13.8	93.4
258	44963	1.2	16.9254	1.1	0.7625	2.7	0.0936	2.5	0.91	576.8	13.8	575.5	12.0	570.2	24.1	576.8	13.8	101.2
229	317178	1.4	14.5805	0.9	1.2560	2.5	0.1328	2.3	0.93	803.9	17.6	826.1	14.2	886.3	19.0	803.9	17.6	90.7
472	53444	2.4	17.0148	0.9	0.7477	2.2	0.0923	2.1	0.92	568.9	11.2	566.9	9.8	558.7	19.6	568.9	11.2	101.8
91	14694	1.7	13.4655	0.9	1.8476	3.2	0.1804	3.1	0.96	1069.4	30.5	1062.6	21.3	1048.7	18.4	1048.7	18.4	102.0
277	372359	4.4	14.8130	0.8	1.3317	2.6	0.1431	2.5	0.95	862.0	20.2	859.6	15.3	853.5	17.5	862.0	20.2	101.0
296	98396	2.2	16.7711	0.9	0.8027	2.2	0.0976	2.0	0.92	600.6	11.6	598.4	10.0	590.0	19.0	600.6	11.6	101.8
111	13573	0.8	16.9994	1.1	0.7590	4.0	0.0936	3.8	0.96	576.7	20.9	573.4	17.3	560.7	24.7	576.7	20.9	102.9

189	47604	3.7	17.2250	0.9	0.6617	3.1	0.0827	2.9	0.96	512.0	14.5	515.6	12.4	531.9	19.4	512.0	14.5	96.3
707	70633	17.3	16.8426	0.7	0.7852	2.0	0.0959	1.9	0.95	590.4	10.7	588.5	8.9	580.8	14.2	590.4	10.7	101.7
470	96649	3.2	8.9213	0.8	5.1133	2.0	0.3308	1.9	0.93	1842.5	30.4	1838.3	17.4	1833.6	14.0	1833.6	14.0	100.5
965	156859	16.5	16.7594	0.6	0.7928	1.8	0.0964	1.7	0.94	593.1	9.5	592.8	8.0	591.6	13.5	593.1	9.5	100.3
206	22981	1.3	17.0060	0.9	0.7948	2.6	0.0980	2.5	0.94	602.8	14.3	593.9	11.9	559.8	19.7	602.8	14.3	107.7
154	35935	2.8	16.8437	0.9	0.7413	2.5	0.0906	2.4	0.93	558.8	12.6	563.1	10.9	580.7	19.6	558.8	12.6	96.2
544	60535	1.9	16.4268	0.7	0.8309	2.0	0.0990	1.9	0.94	608.5	11.1	614.1	9.4	634.9	15.0	608.5	11.1	95.9
521	141702	1.6	12.6205	0.6	2.1798	2.0	0.1995	1.9	0.95	1172.8	20.0	1174.6	13.6	1178.1	11.6	1178.1	11.6	99.6
527	50723	3.5	16.5859	0.7	0.8408	2.4	0.1011	2.3	0.96	621.1	13.7	619.6	11.2	614.1	14.1	621.1	13.7	101.1
1499	122028	7.9	16.7406	0.6	0.7606	1.9	0.0923	1.8	0.95	569.4	9.6	574.3	8.1	594.0	12.7	569.4	9.6	95.9
1927	1649055	12.8	16.5837	0.6	0.8035	1.8	0.0966	1.7	0.95	594.7	9.9	598.8	8.3	614.3	13.0	594.7	9.9	96.8
103	14784	1.7	17.2608	1.3	0.6766	3.5	0.0847	3.3	0.93	524.1	16.5	524.7	14.5	527.3	28.9	524.1	16.5	99.4
621	74511	2.0	16.1465	0.6	0.9082	2.4	0.1064	2.4	0.97	651.5	14.7	656.1	11.8	671.8	12.6	651.5	14.7	97.0
1858	137296	10.9	16.5920	0.8	0.7950	2.0	0.0957	1.9	0.92	588.9	10.5	594.0	9.1	613.3	16.8	588.9	10.5	96.0
2628	244874	13.7	17.0754	0.5	0.7027	1.7	0.0870	1.6	0.95	537.9	8.3	540.4	7.1	550.9	11.7	537.9	8.3	97.6
349	24543	3.6	16.4244	0.8	0.8733	2.3	0.1040	2.1	0.93	638.0	12.7	637.4	10.7	635.2	18.3	638.0	12.7	100.4
329	94462	23.3	17.0537	0.8	0.6896	2.7	0.0853	2.5	0.96	527.7	12.9	532.6	11.0	553.7	16.8	527.7	12.9	95.3
184	31368	2.1	17.0582	0.9	0.7249	2.4	0.0897	2.2	0.92	553.7	11.5	553.6	10.1	553.1	20.6	553.7	11.5	100.1
102	11127	17.2	17.1947	1.4	0.6996	3.8	0.0872	3.5	0.93	539.2	18.3	538.5	15.8	535.7	29.8	539.2	18.3	100.7
286	612028	4.4	16.8523	1.0	0.6999	2.7	0.0855	2.5	0.93	529.1	12.7	538.7	11.2	579.6	20.9	529.1	12.7	91.3
1470	112804	4.3	17.0545	0.6	0.7658	1.7	0.0947	1.6	0.94	583.4	8.9	577.4	7.5	553.6	12.7	583.4	8.9	105.4
871	58422	6.6	16.3855	0.8	0.8590	2.1	0.1021	2.0	0.93	626.6	11.6	629.6	9.9	640.3	16.8	626.6	11.6	97.9
733	61339	1.9	16.5540	0.9	0.8230	2.3	0.0988	2.1	0.92	607.4	12.3	609.7	10.6	618.2	19.9	607.4	12.3	98.3
806	64482	5.0	16.0874	0.7	0.9098	2.1	0.1061	2.0	0.94	650.3	12.2	656.9	10.2	679.6	15.9	650.3	12.2	95.7
19	4857	4.9	17.6487	2.0	0.6709	8.8	0.0859	8.6	0.97	531.1	43.7	521.3	35.9	478.4	43.9	531.1	43.7	111.0
72	5816	2.5	18.2965	1.4	0.6541	3.6	0.0868	3.3	0.92	536.5	16.9	511.0	14.3	398.1	31.8	536.5	16.9	134.8
291	22590	2.5	16.5928	0.8	0.8762	2.5	0.1054	2.4	0.94	646.2	14.5	638.9	11.8	613.2	18.0	646.2	14.5	105.4
573	77384	7.1	16.1868	0.7	0.9355	2.5	0.1098	2.4	0.96	671.8	15.5	670.5	12.5	666.5	15.9	671.8	15.5	100.8
1299	314955	4.8	16.3565	0.6	0.8355	1.9	0.0991	1.8	0.95	609.2	10.6	616.7	8.9	644.1	12.7	609.2	10.6	94.6
474	174275	43.0	17.0096	0.8	0.7497	2.1	0.0925	2.0	0.93	570.3	10.7	568.1	9.2	559.3	16.7	570.3	10.7	101.9
511	114931	3.0	15.1215	0.7	1.0798	2.0	0.1184	1.9	0.94	721.5	13.1	743.5	10.8	810.5	14.1	721.5	13.1	89.0
1164	483855	2.1	16.6339	0.6	0.8007	1.7	0.0966	1.6	0.94	594.4	9.2	597.2	7.8	607.8	12.9	594.4	9.2	97.8
924	134687	*4.8*	16.9803	0.5	0.7173	1.5	0.0883	1.4	0.94	545.7	7.2	549.1	6.2	563.1	10.6	545.7	7.2	96.9
319	33545	1.6	16.6985	0.6	0.8374	2.3	0.1014	2.3	0.96	622.7	13.4	617.7	10.9	599.4	13.3	622.7	13.4	103.9
402	135745	3.0	16.2133	0.7	0.9461	2.3	0.1113	2.1	0.95	680.0	13.8	676.1	11.1	662.9	15.7	680.0	13.8	102.6
1573	356992	10.3	16.7354	0.5	0.7978	1.5	0.0968	1.4	0.93	595.8	7.7	595.6	6.6	594.6	11.9	595.8	7.7	100.2
901	116457	10.9	16.5583	0.6	0.8047	2.1	0.0966	2.0	0.96	594.7	11.5	599.5	9.5	617.6	11.9	594.7	11.5	96.3
734	60284	3.5	16.3572	0.5	0.9182	2.1	0.1089	2.1	0.97	666.5	13.1	661.4	10.4	644.0	11.7	666.5	13.1	103.5
214	85848	0.5	17.3013	1.0	0.6906	2.5	0.0867	2.3	0.92	535.8	11.7	533.2	10.3	522.1	20.9	535.8	11.7	102.6
302	110438	7.7	14.1328	0.8	1.5023	2.8	0.1540	2.7	0.96	923.3	22.9	931.3	16.9	950.4	16.2	950.4	16.2	97.1
212	50614	2.2	16.9651	0.9	0.7407	2.6	0.0911	2.5	0.94	562.3	13.3	562.8	11.4	565.0	19.3	562.3	13.3	99.5

358	67686	6.3	13.5822	0.7	1.6788	2.6	0.1654	2.5	0.96	986.6	22.4	1000.5	16.2	1031.2	14.3	1031.2	14.3	95.7
333	178086	1.6	16.8189	0.6	0.7847	2.0	0.0957	1.9	0.95	589.3	10.5	588.1	8.7	583.8	13.3	589.3	10.5	100.9
624	5551731	1.7	16.5956	0.7	0.8081	2.2	0.0973	2.0	0.94	598.4	11.6	601.4	9.8	612.8	16.1	598.4	11.6	97.6
114	6718	3.0	17.6247	1.7	0.6627	3.1	0.0847	2.7	0.85	524.1	13.4	516.2	12.7	481.4	36.8	524.1	13.4	108.9
940	240471	4.4	16.6103	0.7	0.8046	2.0	0.0969	1.9	0.93	596.4	10.7	599.4	9.1	610.9	15.9	596.4	10.7	97.6
23	11192	1.4	13.7416	1.6	1.7409	5.3	0.1735	5.0	0.95	1031.4	47.8	1023.8	33.9	1007.6	32.0	1007.6	32.0	102.4
612	729088	7.7	17.0319	0.8	0.7055	2.8	0.0871	2.7	0.96	538.6	14.2	542.1	11.9	556.5	16.4	538.6	14.2	96.8
754	99205	4.6	16.7080	0.8	0.7908	2.2	0.0958	2.1	0.94	589.9	11.6	591.6	9.8	598.2	16.5	589.9	11.6	98.6
295	54219	2.1	16.9277	0.9	0.7407	2.1	0.0909	2.0	0.92	561.1	10.5	562.8	9.2	569.9	18.6	561.1	10.5	98.5
502	51619	2.3	16.5360	0.7	0.8492	2.2	0.1018	2.1	0.95	625.2	12.6	624.2	10.4	620.6	15.6	625.2	12.6	100.7
535	1127414	2.0	16.3991	0.8	0.9300	1.9	0.1106	1.7	0.92	676.3	11.2	667.6	9.3	638.5	16.5	676.3	11.2	105.9
499	124100	6.0	16.9856	0.7	0.7693	2.0	0.0948	1.9	0.93	583.7	10.3	579.4	8.8	562.4	15.8	583.7	10.3	103.8
428	58654	1.9	13.1707	0.7	1.9243	1.6	0.1838	1.5	0.91	1087.8	14.6	1089.5	10.7	1093.1	13.2	1093.1	13.2	99.5
236	75781	2.1	14.2497	0.8	1.4185	3.1	0.1466	3.0	0.97	881.9	24.8	896.7	18.5	933.6	15.7	933.6	15.7	94.5
549	54526	2.8	17.0183	1.0	0.7388	2.1	0.0912	1.9	0.88	562.6	10.1	561.7	9.2	558.2	22.5	562.6	10.1	100.8
1232	5236981	1.8	17.2112	0.5	0.7017	1.7	0.0876	1.7	0.96	541.3	8.6	539.8	7.2	533.6	10.8	541.3	8.6	101.4
123	18298	1.0	17.2168	1.3	0.7355	3.4	0.0918	3.1	0.93	566.4	17.1	559.8	14.6	532.9	27.5	566.4	17.1	106.3
129	9330	0.6	17.4056	1.3	0.6776	3.0	0.0855	2.8	0.91	529.1	14.0	525.4	12.5	509.0	28.4	529.1	14.0	104.0
380	170279	2.2	14.6318	0.7	1.3892	2.2	0.1474	2.1	0.95	886.5	17.4	884.3	13.0	879.0	13.6	886.5	17.4	100.9
1811	104333	7.8	16.6722	0.6	0.8141	1.9	0.0984	1.8	0.94	605.3	10.1	604.8	8.5	602.8	14.0	605.3	10.1	100.4
999	381880	2.5	14.5072	0.7	1.3233	2.0	0.1392	1.9	0.95	840.3	15.1	856.0	11.7	896.7	13.6	840.3	15.1	93.7
228	455019	2.5	16.3617	0.9	0.8854	2.1	0.1051	1.9	0.89	644.0	11.5	643.9	10.0	643.4	20.4	644.0	11.5	100.1
112	58046	1.6	17.0620	1.2	0.7485	4.0	0.0926	3.8	0.96	571.0	20.8	567.3	17.3	552.6	25.2	571.0	20.8	103.3
385	37538	1.9	16.7544	0.8	0.7907	2.3	0.0961	2.2	0.94	591.4	12.2	591.5	10.3	592.2	17.3	591.4	12.2	99.9
321	32838	3.2	16.9198	0.8	0.7094	2.2	0.0870	2.1	0.94	538.1	10.8	544.4	9.4	570.9	16.4	538.1	10.8	94.3
229	19208	1.2	17.2634	1.0	0.7088	2.8	0.0887	2.6	0.93	548.1	13.8	544.0	11.9	527.0	22.9	548.1	13.8	104.0
1239	293522	62.4	16.3502	0.8	0.8572	2.1	0.1016	1.9	0.92	624.1	11.2	628.6	9.6	644.9	17.6	624.1	11.2	96.8
59	39707	2.9	5.6803	0.9	11.0571	3.8	0.4555	3.7	0.97	2419.8	75.3	2528.0	35.7	2616.0	14.3	2616.0	14.3	92.5
471	111970	2.5	17.1702	0.7	0.6647	2.1	0.0828	2.0	0.94	512.7	9.8	517.5	8.6	538.8	16.4	512.7	9.8	95.1
89	14389	1.5	15.7680	1.2	1.0312	3.2	0.1179	2.9	0.92	718.7	19.7	719.5	16.2	722.3	26.2	718.7	19.7	99.5
85	24724	0.5	17.8059	1.2	0.6530	3.1	0.0843	2.8	0.91	521.9	14.0	510.3	12.3	458.7	27.4	521.9	14.0	113.8
196	66805	2.0	16.9602	0.7	0.7357	2.5	0.0905	2.4	0.96	558.4	13.0	559.9	10.9	565.7	15.8	558.4	13.0	98.7
304	62993	2.2	17.2535	0.9	0.7376	2.3	0.0923	2.1	0.92	569.2	11.5	561.0	9.9	528.2	20.0	569.2	11.5	107.7
582	120933	2.6	16.6681	0.7	0.8081	2.1	0.0977	1.9	0.94	600.8	11.1	601.4	9.3	603.4	14.9	600.8	11.1	99.6
441	41002	3.5	16.8025	0.7	0.7786	1.9	0.0949	1.8	0.93	584.4	9.8	584.7	8.4	586.0	14.8	584.4	9.8	99.7
561	46889	4.6	16.7840	0.8	0.7873	2.3	0.0958	2.2	0.95	590.0	12.4	589.7	10.4	588.4	16.5	590.0	12.4	100.3
567	97463	3.0	16.8744	0.8	0.7170	1.8	0.0877	1.6	0.91	542.2	8.5	548.9	7.7	576.7	16.4	542.2	8.5	94.0
78	7248	1.4	17.8008	1.5	0.7074	4.2	0.0913	3.9	0.94	563.4	21.1	543.2	17.5	459.4	32.6	563.4	21.1	122.6
245	86408	4.2	14.2172	0.6	1.5392	2.2	0.1587	2.2	0.96	949.6	19.1	946.2	13.8	938.2	12.2	938.2	12.2	101.2

Porphyry

U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
631	65978	3.5	17.3604	1.1	0.6510	3.0	0.0820	2.8	0.93	507.9	13.6	509.1	12.0	514.6	23.7	507.9	13.6	98.7
527	38353	2.8	17.4078	0.9	0.6519	2.6	0.0823	2.4	0.94	509.9	12.0	509.7	10.4	508.7	18.8	509.9	12.0	100.2
537	124438	3.3	17.1910	0.8	0.6642	2.8	0.0828	2.7	0.96	512.9	13.4	517.2	11.5	536.2	17.1	512.9	13.4	95.7
463	90456	3.6	17.2446	0.9	0.6629	2.5	0.0829	2.4	0.94	513.4	11.8	516.4	10.3	529.4	19.2	513.4	11.8	97.0
383	48791	2.5	17.2251	0.8	0.6676	2.2	0.0834	2.0	0.92	516.4	9.9	519.2	8.8	531.9	18.6	516.4	9.9	97.1
337	44936	3.1	17.3226	1.0	0.6672	3.1	0.0838	2.9	0.94	518.9	14.6	519.0	12.6	519.4	22.3	518.9	14.6	99.9
604	98678	3.3	17.0388	0.7	0.6787	2.7	0.0839	2.6	0.96	519.2	12.9	526.0	11.0	555.6	15.3	519.2	12.9	93.4
439	38392	3.4	17.2661	1.0	0.6701	2.6	0.0839	2.4	0.91	519.4	11.8	520.8	10.5	526.6	23.0	519.4	11.8	98.6
451	222824	3.1	17.1620	0.9	0.6744	2.5	0.0839	2.4	0.94	519.6	11.9	523.4	10.4	539.9	19.2	519.6	11.9	96.3
252	77851	3.1	17.1521	1.0	0.6755	2.8	0.0840	2.6	0.93	520.2	13.1	524.1	11.5	541.2	22.2	520.2	13.1	96.1
505	96573	3.5	17.3464	0.8	0.6700	3.0	0.0843	2.8	0.96	521.7	14.2	520.7	12.0	516.4	18.6	521.7	14.2	101.0
203	16229	2.2	17.0998	1.2	0.6822	3.3	0.0846	3.1	0.93	523.6	15.6	528.1	13.7	547.8	26.3	523.6	15.6	95.6
617	50734	2.1	16.7382	0.8	0.8005	2.5	0.0972	2.4	0.94	597.8	13.7	597.1	11.5	594.3	18.3	597.8	13.7	100.6
1180	939852	3.2	15.6944	0.7	1.0647	2.6	0.1212	2.5	0.96	737.4	17.5	736.1	13.7	732.3	15.6	737.4	17.5	100.7
785	427769	8.1	13.9888	0.7	1.5078	2.3	0.1530	2.2	0.96	917.6	19.0	933.6	14.2	971.3	13.9	971.3	13.9	94.5
237	81087	4.3	13.9007	0.8	1.7102	3.6	0.1724	3.5	0.97	1025.4	33.6	1012.3	23.3	984.2	16.7	984.2	16.7	104.2
132	20642	2.2	13.7887	1.0	1.6407	3.5	0.1641	3.3	0.96	979.4	30.4	986.0	22.0	1000.6	19.9	1000.6	19.9	97.9
115	17884	2.2	13.6514	1.3	1.7399	4.2	0.1723	4.0	0.95	1024.6	37.9	1023.4	27.2	1020.9	26.5	1020.9	26.5	100.4
579	61340	1.6	13.6342	0.8	1.4800	2.1	0.1464	2.0	0.93	880.5	16.1	922.2	12.7	1023.5	15.2	1023.5	15.2	86.0
405	193638	5.6	13.5824	0.8	1.6864	3.2	0.1661	3.1	0.97	990.7	28.1	1003.4	20.2	1031.2	16.8	1031.2	16.8	96.1
666	32686	8.8	13.5724	0.8	1.6638	2.4	0.1638	2.2	0.93	977.8	19.9	994.8	14.9	1032.7	17.1	1032.7	17.1	94.7
588	830991	4.6	13.5353	1.0	1.7019	2.8	0.1671	2.6	0.94	995.9	24.0	1009.2	17.7	1038.2	19.2	1038.2	19.2	95.9
164	40239	1.2	13.3312	0.9	1.7940	3.1	0.1735	3.0	0.95	1031.1	28.2	1043.3	20.3	1068.8	19.0	1068.8	19.0	96.5
163	40678	2.5	13.2817	1.0	1.8934	3.6	0.1824	3.5	0.96	1080.0	34.5	1078.8	24.0	1076.3	20.2	1076.3	20.2	100.3
128	64664	1.7	13.2410	1.0	1.7996	3.0	0.1728	2.8	0.94	1027.6	27.0	1045.3	19.7	1082.5	20.1	1082.5	20.1	94.9
243	58229	1.9	13.2346	0.9	1.8885	3.3	0.1813	3.2	0.96	1073.9	31.9	1077.1	22.2	1083.4	17.9	1083.4	17.9	99.1
216	1576235	3.1	13.1481	1.1	1.8551	3.1	0.1769	2.9	0.93	1050.0	27.8	1065.2	20.3	1096.6	22.2	1096.6	22.2	95.8
325	168829	3.0	13.1404	0.9	1.8633	4.3	0.1776	4.2	0.98	1053.7	40.5	1068.1	28.1	1097.7	17.2	1097.7	17.2	96.0

Academy Glacier Rocks

LIC White Sandstone

U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
663	42931	3.3	17.3665	0.8	0.6511	1.8	0.0820	1.6	0.90	508.1	8.0	509.2	7.3	513.9	17.2	508.1	8.0	98.9
199	29715	2.6	17.1349	1.2	0.6601	3.2	0.0820	2.9	0.93	508.3	14.4	514.7	12.8	543.3	26.3	508.3	14.4	93.5
155	39679	25.6	17.3463	1.4	0.6551	4.0	0.0824	3.7	0.93	510.6	18.2	511.6	16.0	516.4	31.3	510.6	18.2	98.9
73	13471	2.4	17.3064	1.5	0.6574	4.1	0.0825	3.8	0.93	511.1	18.7	513.0	16.5	521.5	32.5	511.1	18.7	98.0
132	31504	1.2	17.1871	1.0	0.6672	2.3	0.0832	2.1	0.91	515.0	10.5	519.0	9.5	536.7	20.8	515.0	10.5	96.0
73	32614	1.3	16.8363	1.9	0.6838	3.7	0.0835	3.2	0.86	517.0	15.8	529.1	15.2	581.6	40.8	517.0	15.8	88.9
700	185140	0.9	17.1999	0.8	0.6698	2.1	0.0836	1.9	0.93	517.3	9.5	520.6	8.4	535.0	16.7	517.3	9.5	96.7
927	79744	8.3	17.1254	0.6	0.6785	2.2	0.0843	2.2	0.96	521.6	10.8	525.9	9.2	544.5	13.1	521.6	10.8	95.8
359	14905	4.6	17.3447	0.9	0.6706	2.5	0.0844	2.3	0.93	522.1	11.7	521.1	10.2	516.6	20.5	522.1	11.7	101.1
441	137789	3.9	16.9032	0.9	0.6900	2.6	0.0846	2.5	0.95	523.5	12.6	532.8	10.9	573.0	18.6	523.5	12.6	91.4
175	5474	4.3	16.2739	1.0	0.7186	2.4	0.0848	2.1	0.90	524.8	10.8	549.8	10.1	654.9	22.0	524.8	10.8	80.1
765	215560	9.5	17.2450	0.6	0.6789	1.6	0.0849	1.4	0.92	525.4	7.2	526.1	6.4	529.3	13.7	525.4	7.2	99.3
458	644634	2.0	17.3116	0.9	0.6775	2.6	0.0851	2.4	0.93	526.3	12.1	525.3	10.5	520.8	20.1	526.3	12.1	101.0
429	28565	5.3	17.4168	0.8	0.6745	2.5	0.0852	2.4	0.95	527.1	12.2	523.4	10.4	507.5	17.1	527.1	12.2	103.9
521	60331	16.7	17.1688	0.7	0.6848	2.3	0.0853	2.2	0.95	527.5	11.3	529.7	9.7	539.0	16.0	527.5	11.3	97.9
235	25171	2.3	17.1702	1.1	0.6853	2.6	0.0853	2.4	0.90	527.9	12.0	530.0	10.8	538.8	24.5	527.9	12.0	98.0
153	56758	2.6	17.2887	1.1	0.6811	2.7	0.0854	2.4	0.91	528.3	12.3	527.4	10.9	523.7	24.0	528.3	12.3	100.9
86	27824	5.2	17.0845	1.1	0.6911	3.5	0.0856	3.3	0.95	529.7	17.0	533.5	14.5	549.7	23.5	529.7	17.0	96.4
138	43614	2.5	17.0182	1.1	0.6948	3.1	0.0858	2.9	0.93	530.4	14.7	535.7	12.9	558.2	24.3	530.4	14.7	95.0
467	56954	3.1	17.2406	0.8	0.6870	2.1	0.0859	1.9	0.92	531.2	9.9	531.0	8.7	529.9	17.9	531.2	9.9	100.3
734	104007	3.2	17.1238	0.8	0.6945	2.1	0.0863	1.9	0.92	533.3	9.8	535.5	8.7	544.7	18.1	533.3	9.8	97.9
625	56756	4.4	16.9987	0.6	0.7006	2.1	0.0864	2.1	0.96	534.1	10.5	539.2	9.0	560.7	13.3	534.1	10.5	95.2
137	24686	1.5	16.9453	1.1	0.7039	2.8	0.0865	2.6	0.92	534.9	13.1	541.1	11.7	567.6	23.9	534.9	13.1	94.2
213	63752	2.4	16.9241	1.1	0.7062	2.9	0.0867	2.7	0.93	535.9	14.0	542.5	12.3	570.3	23.3	535.9	14.0	94.0
318	74404	3.1	17.2052	0.9	0.6959	2.1	0.0868	2.0	0.91	536.8	10.0	536.3	8.9	534.3	19.2	536.8	10.0	100.5
198	42526	2.3	17.3584	0.9	0.6917	2.7	0.0871	2.5	0.94	538.3	13.0	533.8	11.1	514.9	19.9	538.3	13.0	104.5
660	569407	19.2	17.0319	0.7	0.7054	2.2	0.0871	2.1	0.95	538.6	11.0	542.0	9.4	556.5	14.8	538.6	11.0	96.8
175	270593	4.4	17.0293	0.9	0.7062	3.2	0.0872	3.0	0.96	539.1	15.7	542.5	13.4	556.8	20.4	539.1	15.7	96.8
397	46880	2.1	17.0165	1.0	0.7068	2.7	0.0872	2.5	0.93	539.1	12.8	542.9	11.2	558.5	20.8	539.1	12.8	96.5
376	20422	6.6	17.1379	0.9	0.7033	2.5	0.0874	2.3	0.94	540.2	12.2	540.7	10.5	542.9	19.4	540.2	12.2	99.5
141	15829	1.3	17.1171	1.1	0.7049	2.9	0.0875	2.7	0.93	540.8	14.1	541.7	12.4	545.6	24.3	540.8	14.1	99.1
342	116739	6.5	16.9741	0.7	0.7123	2.3	0.0877	2.2	0.95	541.9	11.4	546.1	9.8	563.9	16.3	541.9	11.4	96.1
458	47856	1.2	17.0598	0.7	0.7088	2.0	0.0877	1.9	0.93	541.9	9.7	544.0	8.5	552.9	15.7	541.9	9.7	98.0
175	28996	1.1	16.9781	1.0	0.7142	3.1	0.0879	2.9	0.95	543.4	15.2	547.2	13.1	563.4	21.9	543.4	15.2	96.5
103	26262	1.7	17.2809	1.1	0.7048	2.6	0.0883	2.4	0.91	545.7	12.6	541.6	11.1	524.7	23.7	545.7	12.6	104.0
111	16384	2.6	17.1948	1.2	0.7103	3.2	0.0886	2.9	0.92	547.1	15.2	544.9	13.3	535.7	27.1	547.1	15.2	102.1
429	84362	19.6	16.9077	0.9	0.7225	2.3	0.0886	2.2	0.93	547.2	11.3	552.1	9.9	572.4	19.2	547.2	11.3	95.6
295	48578	0.9	16.7994	0.8	0.7300	2.5	0.0889	2.4	0.95	549.3	12.5	556.5	10.8	586.4	17.8	549.3	12.5	93.7
763	214676	2.1	16.8324	0.8	0.7288	2.2	0.0890	2.1	0.94	549.4	11.1	555.8	9.6	582.1	16.3	549.4	11.1	94.4
1037	1241451	44.3	17.0178	0.8	0.7210	2.3	0.0890	2.1	0.94	549.6	11.3	551.3	9.7	558.3	16.6	549.6	11.3	98.4
174	27401	1.8	16.9483	1.0	0.7241	3.0	0.0890	2.8	0.95	549.7	15.0	553.1	12.8	567.2	20.8	549.7	15.0	96.9
203	531331	3.1	17.0488	0.9	0.7215	2.4	0.0892	2.2	0.93	550.9	11.7	551.6	10.2	554.3	19.4	550.9	11.7	99.4
101	10850	2.1	17.2735	1.4	0.7135	3.8	0.0894	3.5	0.93	551.9	18.6	546.8	15.9	525.7	29.6	551.9	18.6	105.0
299	31278437	2.4	16.5591	0.9	0.7456	2.8	0.0895	2.6	0.95	552.8	13.8	565.7	12.0	617.6	19.2	552.8	13.8	89.5
552	11314	2.7	16.4247	0.8	0.7548	2.3	0.0899	2.1	0.93	555.1	11.4	571.0	10.1	635.2	17.8	555.1	11.4	87.4
260	20315	1.9	17.2027	0.9	0.7208	2.4	0.0899	2.3	0.93	555.1	12.0	551.1	10.3	534.7	19.4	555.1	12.0	103.8
372	38079	1.3	17.0745	0.6	0.7262	2.0	0.0899	1.9	0.95	555.1	10.2	554.3	8.6	551.0	13.4	555.1	10.2	100.7
558	147475	9.3	16.9865	0.8	0.7304	2.4	0.0900	2.3	0.94	555.5	12.0	556.8	10.3	562.3	17.9	555.5	12.0	98.8
190	73811	2.3	16.9644	0.9	0.7376	2.4	0.0907	2.2	0.92	560.0	11.8	561.0	10.3	565.1	20.2	560.0	11.8	99.1
408	43165	2.7	16.6780	0.8	0.7524	2.8	0.0910	2.7	0.96	561.5	14.3	569.6	12.2	602.1	17.8	561.5	14.3	93.3
72	6175	1.8	16.8719	1.6	0.7457	3.4	0.0913	3.0	0.89	562.9	16.4	565.7	14.9	577.1	34.5	562.9	16.4	97.6
36	59034	0.8	16.9616	1.8	0.7420	5.1	0.0913	4.7	0.93	563.1	25.4	563.6	21.8	565.5	39.5	563.1	25.4	99.6
299	57427	2.0	17.0181	0.8	0.7400	2.1	0.0913	2.0	0.93	563.4	10.8	562.4	9.3	558.2	16.8	563.4	10.8	100.9
874	22938	14.1	16.4046	0.8	0.7682	2.0	0.0914	1.8	0.91	563.8	9.9	578.7	8.8	637.8	17.5	563.8	9.9	88.4
365	157370	2.2	16.8912	1.2	0.7488	2.7	0.0917	2.4	0.90	565.8	13.1	567.5	11.7	574.5	25.7	565.8	13.1	98.5
451	71989	2.8	16.8341	0.8	0.7528	2.4	0.0919	2.3	0.94	566.8	12.4	569.9	10.6	581.9	18.3	566.8	12.4	97.4
271	63915	1.9	16.5166	1.1	0.7685	2.9	0.0921	2.7	0.93	567.7	14.7	578.9	12.9	623.1	24.0	567.7	14.7	91.1
125	23311	2.3	16.8474	1.3	0.7563	3.3	0.0924	3.0	0.92	569.8	16.3	571.9	14.3	580.2	28.3	569.8	16.3	98.2
462	69445	20.5	16.8751	0.9	0.7554	2.4	0.0925	2.2	0.92	570.0	12.2	571.3	10.6	576.6	20.3	570.0	12.2	98.9
522	65343	5.6	16.9407	0.9	0.7532	2.5	0.0925	2.3	0.94	570.5	12.7	570.1	10.8	568.2	18.8	570.5	12.7	100.4
592	1462921	2.0	16.8139	0.6	0.7604	2.3	0.0927	2.2	0.97	571.7	12.3	574.2	10.2	584.5	12.5	571.7	12.3	97.8
398	50119	34.2	16.6890	0.8	0.7667	2.4	0.0928	2.3	0.94	572.1	12.6	577.9	10.8	600.7	18.2	572.1	12.6	95.2
207	121879	1.8	16.5288	0.9	0.7749	2.3	0.0929	2.1	0.91	572.6	11.4	582.6	10.1	621.5	19.9	572.6	11.4	92.1
327	33666	1.8	16.9773	0.9	0.7555	2.7	0.0930	2.6	0.95	573.4	14.0	571.4	11.8	563.5	18.5	573.4	14.0	101.8
121	43005	2.8	16.9036	1.1	0.7605	3.1	0.0932	2.9	0.94	574.6	15.9	574.3	13.6	572.9	23.8	574.6	15.9	100.3
241	135472	2.1	16.6549	0.9	0.7720	2.4	0.0932	2.2	0.92	574.7	11.9	580.9	10.4	605.1	20.4	574.7	11.9	95.0
232	2879378	2.1	16.7950	0.9	0.7655	2.7	0.0932	2.5	0.94	574.7	13.9	577.2	11.8	586.9	20.0	574.7	13.9	97.9
1012	342070	32.3	16.9265	0.7	0.7604	2.0	0.0934	1.9	0.94	575.3	10.2	574.2	8.6	570.0	14.3	575.3	10.2	100.9
348	38748	1.6	16.9870	0.6	0.7595	2.3	0.0936	2.2	0.96	576.6	12.2	573.7	10.1	562.2	13.8	576.6	12.2	102.6
585	119531	4.1	16.7587	0.5	0.7708	1.9	0.0937	1.9	0.96	577.3	10.2	580.2	8.5	591.6	11.2	577.3	10.2	97.6
147	12778	0.7	16.8200	0.9	0.7685	2.8	0.0937	2.6	0.94	577.7	14.5	578.9	12.2	583.7	19.9	577.7	14.5	99.0
1842	221215	45.4	16.8417	0.6	0.7714	1.6	0.0942	1.5	0.93	580.5	8.1	580.6	7.0	580.9	12.9	580.5	8.1	99.9
99	23006	0.9	16.9615	1.3	0.7666	3.5	0.0943	3.2	0.93	581.0	17.9	577.8	15.3	565.5	28.5	581.0	17.9	102.7
366	60230	1.9	16.9319	0.9	0.7692	2.7	0.0945	2.6	0.95	581.9	14.3	579.3	12.0	569.3	19.1	581.9	14.3	102.2
176	20284	0.9	16.8852	0.9	0.7719	2.8	0.0945	2.7	0.94	582.3	14.8	580.9	12.5	575.3	20.4	582.3	14.8	101.2
149	219337	1.2	16.0918	1.1	0.8134	3.0	0.0949	2.8	0.93	584.6	15.8	604.4	13.8	679.0	23.8	584.6	15.8	86.1
206	23509	1.8	16.8233	0.9	0.7788	2.5	0.0950	2.4	0.93	585.2	13.2	584.8	11.3	583.3	20.5	585.2	13.2	100.3
628	59176	33.3	16.6221	1.0	0.7917	2.8	0.0954	2.6	0.94	587.7	14.8	592.2	12.6	609.4	21.2	587.7	14.8	96.4

444	408090	2.5	16.7719	0.9	0.7879	2.6	0.0958	2.5	0.94	590.0	14.0	590.0	11.8	589.9	19.2	590.0	14.0	100.0
721	1043326	6.8	16.5755	0.7	0.7980	1.8	0.0959	1.7	0.92	590.5	9.6	595.7	8.3	615.4	15.9	590.5	9.6	96.0
1032	84589	4.5	16.5495	0.7	0.8013	2.3	0.0962	2.2	0.95	592.0	12.5	597.6	10.5	618.8	16.0	592.0	12.5	95.7
235	30725	2.6	16.3959	0.8	0.8090	2.6	0.0962	2.4	0.95	592.1	13.8	601.9	11.7	638.9	17.8	592.1	13.8	92.7
483	52527	2.6	16.5801	1.0	0.8043	3.1	0.0967	2.9	0.94	595.2	16.6	599.3	14.0	614.8	22.5	595.2	16.6	96.8
423	99500	18.3	16.6250	0.8	0.8027	2.3	0.0968	2.1	0.94	595.6	12.1	598.4	10.2	609.0	16.6	595.6	12.1	97.8
399	37210	6.4	16.3850	0.7	0.8151	2.0	0.0969	1.8	0.93	596.0	10.4	605.3	8.9	640.4	15.7	596.0	10.4	93.1
986	314298	1.6	16.4893	0.7	0.8105	2.2	0.0969	2.1	0.95	596.4	11.9	602.8	9.9	626.7	14.0	596.4	11.9	95.2
136	19998	42.6	16.5338	1.1	0.8124	3.5	0.0974	3.4	0.95	599.3	19.3	603.8	16.1	620.8	22.8	599.3	19.3	96.5
83	38081	1.5	16.5930	1.3	0.8097	3.5	0.0974	3.2	0.93	599.4	18.5	602.3	15.8	613.1	27.2	599.4	18.5	97.8
390	1508359	1.8	16.5821	0.8	0.8134	2.4	0.0978	2.3	0.95	601.6	13.0	604.3	10.9	614.6	16.8	601.6	13.0	97.9
584	65745	3.7	16.6608	0.7	0.8103	2.1	0.0979	1.9	0.94	602.2	11.1	602.6	9.3	604.3	15.0	602.2	11.1	99.6
840	989756	7.3	16.3530	0.9	0.8260	2.7	0.0980	2.5	0.94	602.5	14.4	611.4	12.2	644.6	19.8	602.5	14.4	93.5
503	106568	4.2	16.6407	0.8	0.8129	2.5	0.0981	2.4	0.95	603.3	14.0	604.1	11.6	606.9	16.5	603.3	14.0	99.4
1383	246534	8.8	16.6834	0.5	0.8115	1.8	0.0982	1.7	0.95	603.8	9.9	603.3	8.2	601.4	11.7	603.8	9.9	100.4
966	404760	3.9	16.5977	0.7	0.8211	2.0	0.0988	1.8	0.94	607.6	10.7	608.6	9.0	612.5	14.6	607.6	10.7	99.2
1794	30947	1.8	16.0857	1.1	0.8475	2.2	0.0989	1.9	0.88	607.8	11.2	623.3	10.3	679.8	22.7	607.8	11.2	89.4
196	48472	1.3	16.6229	1.0	0.8205	2.8	0.0989	2.7	0.93	608.1	15.4	608.3	13.0	609.2	22.3	608.1	15.4	99.8
560	59602	2.2	16.5422	0.7	0.8252	2.0	0.0990	1.9	0.94	608.6	10.8	610.9	9.1	619.8	14.5	608.6	10.8	98.2
420	115172	3.8	16.3837	0.8	0.8338	4.8	0.0991	4.8	0.99	609.0	27.7	615.7	22.4	640.5	17.7	609.0	27.7	95.1
854	758764	11.5	16.8128	0.8	0.8127	2.0	0.0991	1.8	0.92	609.1	10.6	604.0	9.0	584.7	17.2	609.1	10.6	104.2
96	9737	0.7	15.5715	1.8	0.8776	3.4	0.0991	3.0	0.86	609.2	17.2	639.7	16.3	748.9	37.1	609.2	17.2	81.3
406	309592	1.7	16.3402	0.8	0.8378	2.3	0.0993	2.2	0.94	610.2	12.8	617.9	10.8	646.2	17.3	610.2	12.8	94.4
1345	26480	9.3	16.3594	0.8	0.8388	1.9	0.0995	1.8	0.92	611.6	10.4	618.5	9.0	643.7	16.6	611.6	10.4	95.0
742	14373544	7.1	16.4261	0.7	0.8363	2.3	0.0996	2.2	0.95	612.2	12.8	617.1	10.7	635.0	16.0	612.2	12.8	96.4
265	60057	2.5	16.5495	1.0	0.8300	2.8	0.0996	2.7	0.94	612.2	15.6	613.6	13.1	618.8	20.9	612.2	15.6	98.9
422	32536	5.9	16.6778	0.9	0.8248	2.2	0.0998	2.0	0.91	613.1	11.6	610.7	10.0	602.1	19.8	613.1	11.6	101.8
270	108182	3.1	16.6569	0.8	0.8286	3.2	0.1001	3.1	0.97	615.0	18.2	612.8	14.7	604.8	16.6	615.0	18.2	101.7
528	373375	5.2	16.5019	0.7	0.8367	2.4	0.1001	2.3	0.95	615.2	13.6	617.3	11.3	625.0	16.2	615.2	13.6	98.4
1774	21134	11.5	15.8725	1.1	0.8721	2.3	0.1004	2.0	0.89	616.7	11.9	636.7	10.8	708.3	22.5	616.7	11.9	87.1
841	88635	7.3	16.5489	0.6	0.8370	2.2	0.1005	2.1	0.96	617.1	12.4	617.5	10.1	618.9	12.4	617.1	12.4	99.7
615	210640	3.8	16.6520	0.6	0.8335	2.0	0.1007	1.9	0.95	618.3	11.4	615.6	9.3	605.5	13.0	618.3	11.4	102.1
1020	426425	4.2	16.4732	0.6	0.8448	1.9	0.1009	1.8	0.94	619.9	10.5	621.8	8.8	628.8	14.0	619.9	10.5	98.6
181	41893	3.1	16.3436	1.1	0.8524	3.0	0.1010	2.8	0.94	620.5	16.8	626.0	14.2	645.8	22.6	620.5	16.8	96.1
343	64006	2.3	16.3782	0.7	0.8510	2.3	0.1011	2.2	0.95	620.8	12.9	625.2	10.7	641.3	16.0	620.8	12.9	96.8
231	28881	2.4	16.3716	1.1	0.8517	2.5	0.1011	2.2	0.90	621.1	13.1	625.6	11.5	642.1	23.5	621.1	13.1	96.7
488	84726	2.3	16.6056	0.8	0.8403	1.8	0.1012	1.7	0.90	621.5	9.8	619.3	8.6	611.5	17.7	621.5	9.8	101.6
307	44747	2.1	16.4490	0.8	0.8494	2.6	0.1013	2.5	0.96	622.2	15.0	624.3	12.3	632.0	16.2	622.2	15.0	98.5
132	20232	2.5	16.5547	1.1	0.8443	3.2	0.1014	3.0	0.94	622.5	17.9	621.5	15.0	618.1	24.5	622.5	17.9	100.7
232	116387	4.2	16.1504	0.9	0.8678	3.0	0.1017	2.8	0.95	624.1	16.8	634.4	14.0	671.3	19.7	624.1	16.8	93.0
269	81022	3.0	16.2795	0.9	0.8615	2.7	0.1017	2.6	0.94	624.4	15.3	630.9	12.8	654.2	20.0	624.4	15.3	95.5

1275	197848	7.3	16.5903	0.8	0.8489	2.3	0.1021	2.1	0.94	627.0	12.8	624.1	10.6	613.5	16.2	627.0	12.8	102.2
390	175474	1.9	16.1446	1.0	0.8725	2.5	0.1022	2.3	0.92	627.1	13.5	636.9	11.6	672.1	20.4	627.1	13.5	93.3
275	74943	3.1	16.4323	0.8	0.8589	2.7	0.1024	2.6	0.96	628.2	15.7	629.5	12.9	634.2	17.3	628.2	15.7	99.1
199	25816	3.2	16.5291	0.8	0.8544	2.7	0.1024	2.6	0.96	628.6	15.5	627.0	12.6	621.5	16.5	628.6	15.5	101.1
228	35367	3.3	16.3175	1.0	0.8662	2.7	0.1025	2.6	0.93	629.1	15.4	633.5	13.0	649.2	21.4	629.1	15.4	96.9
259	15656	3.8	16.6868	1.1	0.8477	3.0	0.1026	2.8	0.93	629.6	16.7	623.4	13.9	600.9	23.9	629.6	16.7	104.8
409	87692	3.6	16.2825	0.7	0.8691	2.3	0.1026	2.2	0.95	629.8	12.9	635.1	10.7	653.8	14.6	629.8	12.9	96.3
292	86654	3.8	16.4461	0.8	0.8622	2.3	0.1028	2.1	0.93	631.1	12.9	631.3	10.8	632.3	17.7	631.1	12.9	99.8
186	17071	4.2	16.4603	0.9	0.8632	2.5	0.1031	2.3	0.93	632.3	14.1	631.9	11.8	630.5	19.3	632.3	14.1	100.3
68	200596	0.3	15.9477	1.4	0.8927	3.6	0.1033	3.3	0.92	633.4	19.9	647.8	17.2	698.3	30.3	633.4	19.9	90.7
413	135779	3.2	16.2928	0.9	0.8739	2.3	0.1033	2.2	0.93	633.5	13.0	637.7	11.0	652.4	18.8	633.5	13.0	97.1
232	232362	1.8	16.2901	0.9	0.8742	2.3	0.1033	2.1	0.91	633.6	12.6	637.8	10.8	652.8	20.4	633.6	12.6	97.1
115	10276	1.9	16.6207	1.1	0.8581	3.1	0.1034	2.9	0.94	634.5	17.4	629.1	14.4	609.5	23.1	634.5	17.4	104.1
365	433182	5.5	16.4273	0.8	0.8700	2.0	0.1036	1.8	0.92	635.8	10.9	635.5	9.2	634.8	16.5	635.8	10.9	100.1
257	90916	2.1	16.4165	0.7	0.8714	2.5	0.1038	2.4	0.96	636.4	14.4	636.3	11.6	636.2	14.1	636.4	14.4	100.0
649	132477	3.0	16.3261	0.7	0.8764	2.0	0.1038	1.8	0.93	636.5	11.2	639.0	9.4	648.1	15.4	636.5	11.2	98.2
374	147343	4.7	16.3754	0.9	0.8748	2.6	0.1039	2.5	0.94	637.2	15.0	638.2	12.5	641.6	19.7	637.2	15.0	99.3
691	101183	4.3	16.3606	0.7	0.8776	1.8	0.1041	1.7	0.93	638.6	10.4	639.7	8.7	643.6	14.9	638.6	10.4	99.2
103	29714	5.5	16.2532	1.0	0.8842	3.3	0.1042	3.1	0.95	639.1	19.1	643.2	15.7	657.7	21.8	639.1	19.1	97.2
298	34151	5.5	16.1596	0.9	0.8893	2.7	0.1042	2.6	0.94	639.2	15.5	646.0	13.0	670.1	19.7	639.2	15.5	95.4
739	835788	4.0	15.9944	0.7	0.9002	2.5	0.1044	2.4	0.96	640.3	14.9	651.8	12.2	692.0	14.8	640.3	14.9	92.5
715	120722	7.8	16.4713	0.6	0.8751	2.0	0.1045	1.9	0.95	640.9	11.8	638.3	9.6	629.0	13.3	640.9	11.8	101.9
310	106975	3.0	16.1925	1.1	0.8903	2.5	0.1046	2.2	0.90	641.1	13.6	646.5	11.8	665.7	22.9	641.1	13.6	96.3
340	458213	5.1	16.5130	0.7	0.8748	2.7	0.1048	2.6	0.96	642.3	15.7	638.2	12.6	623.6	15.4	642.3	15.7	103.0
1809	47449	11.3	16.3067	0.7	0.8874	1.7	0.1049	1.5	0.91	643.3	9.4	645.0	8.1	650.6	15.5	643.3	9.4	98.9
92	28140	4.7	16.3627	1.3	0.8847	2.8	0.1050	2.5	0.89	643.6	15.5	643.5	13.6	643.3	27.8	643.6	15.5	100.0
417	21034	3.1	16.1166	0.9	0.9019	2.6	0.1054	2.5	0.94	646.1	15.1	652.7	12.6	675.8	19.5	646.1	15.1	95.6
1016	1827777	7.9	15.9596	0.6	0.9110	1.8	0.1055	1.7	0.94	646.3	10.5	657.6	8.8	696.6	13.3	646.3	10.5	92.8
178	33367	3.5	16.2795	0.9	0.8951	2.4	0.1057	2.2	0.93	647.6	13.8	649.1	11.6	654.2	19.6	647.6	13.8	99.0
744	1278680	2.8	16.2086	0.8	0.9007	1.7	0.1059	1.5	0.90	648.8	9.6	652.1	8.3	663.5	16.3	648.8	9.6	97.8
713	54726	15.1	16.4385	0.7	0.8887	2.5	0.1060	2.4	0.96	649.2	14.6	645.7	11.8	633.4	14.4	649.2	14.6	102.5
227	61377	3.7	16.3896	1.0	0.8927	2.8	0.1061	2.6	0.94	650.1	16.3	647.8	13.4	639.8	20.4	650.1	16.3	101.6
415	76432	1.4	15.9460	0.8	0.9189	2.7	0.1063	2.5	0.95	651.1	15.6	661.8	12.9	698.5	18.0	651.1	15.6	93.2
211	13099	3.2	16.3769	0.8	0.8959	2.9	0.1064	2.8	0.96	651.9	17.2	649.5	13.8	641.4	16.5	651.9	17.2	101.6
620	99255	2.1	16.3637	1.1	0.8982	3.1	0.1066	2.9	0.93	653.0	17.9	650.8	14.8	643.2	24.2	653.0	17.9	101.5
348	48851	5.7	16.4547	0.6	0.8937	2.4	0.1067	2.3	0.96	653.3	14.3	648.4	11.5	631.2	13.9	653.3	14.3	103.5
510	70804	4.5	16.4098	0.7	0.8963	2.2	0.1067	2.1	0.95	653.4	13.3	649.8	10.8	637.1	14.8	653.4	13.3	102.6
535	52654	4.0	16.1994	0.7	0.9126	2.0	0.1072	1.9	0.93	656.6	11.9	658.4	9.9	664.8	15.6	656.6	11.9	98.8
257	77159	0.8	15.6411	0.8	0.9454	2.4	0.1073	2.2	0.94	656.8	13.9	675.7	11.7	739.4	17.6	656.8	13.9	88.8
434	72390	3.3	15.3069	1.0	0.9729	3.0	0.1080	2.8	0.94	661.2	17.9	690.0	15.1	785.0	21.7	661.2	17.9	84.2
1532	10764469	3.6	16.1926	0.7	0.9197	2.1	0.1080	1.9	0.93	661.2	12.1	662.2	10.1	665.7	16.0	661.2	12.1	99.3

352	71727	5.1	15.9914	0.8	0.9331	2.4	0.1082	2.2	0.94	662.4	14.1	669.3	11.7	692.4	16.6	662.4	14.1	95.7
289	191746	5.2	16.1300	0.7	0.9273	2.3	0.1085	2.2	0.95	663.9	13.8	666.2	11.3	674.0	15.5	663.9	13.8	98.5
481	36469	4.5	15.9039	0.8	0.9407	2.3	0.1085	2.1	0.94	664.1	13.4	673.2	11.1	704.1	16.4	664.1	13.4	94.3
620	157727	3.8	16.2627	0.9	0.9209	2.6	0.1086	2.5	0.94	664.7	15.6	662.8	12.7	656.4	18.4	664.7	15.6	101.3
247	511720	1.9	15.6265	1.0	0.9644	3.1	0.1093	3.0	0.95	668.7	18.8	685.6	15.6	741.4	21.2	668.7	18.8	90.2
1233	186321	4.1	16.1555	0.6	0.9331	2.0	0.1093	1.9	0.95	668.9	12.1	669.3	9.8	670.6	13.2	668.9	12.1	99.7
304	1274030	7.7	15.8722	0.7	0.9581	2.6	0.1103	2.5	0.96	674.4	15.9	682.3	12.9	708.4	15.5	674.4	15.9	95.2
584	195687	5.0	15.9960	0.8	0.9523	2.2	0.1105	2.0	0.93	675.5	13.1	679.3	10.9	691.8	16.9	675.5	13.1	97.7
551	178189	6.4	16.1312	0.6	0.9473	2.2	0.1108	2.1	0.96	677.5	13.3	676.7	10.6	673.8	12.7	677.5	13.3	100.6
418	74305	4.9	16.2850	0.7	0.9395	2.5	0.1110	2.3	0.95	678.3	15.1	672.6	12.1	653.5	15.8	678.3	15.1	103.8
927	104775	6.7	16.0655	0.8	0.9545	2.0	0.1112	1.9	0.93	679.8	12.3	680.4	10.2	682.5	16.2	679.8	12.3	99.6
145	22705	2.0	15.3632	1.1	0.9986	3.1	0.1113	2.9	0.94	680.1	18.9	703.1	15.8	777.2	22.9	680.1	18.9	87.5
200	71575	5.0	16.0787	0.9	0.9551	3.0	0.1114	2.8	0.95	680.7	18.2	680.7	14.7	680.8	19.6	680.7	18.2	100.0
285	46426	3.8	16.0593	0.6	0.9629	2.4	0.1122	2.3	0.96	685.2	15.2	684.8	12.1	683.4	13.7	685.2	15.2	100.3
526	194481	1.6	16.0380	0.6	0.9646	2.5	0.1122	2.5	0.97	685.5	16.1	685.7	12.7	686.2	12.4	685.5	16.1	99.9
1499	119997	8.0	15.7679	0.7	0.9837	2.2	0.1125	2.0	0.94	687.2	13.3	695.5	11.0	722.3	15.9	687.2	13.3	95.1
94	9777	6.9	16.2495	1.0	0.9564	2.9	0.1127	2.7	0.94	688.5	18.0	681.4	14.5	658.2	21.4	688.5	18.0	104.6
1142	283033	5.7	15.8766	0.7	0.9842	2.2	0.1133	2.1	0.95	692.1	13.9	695.8	11.2	707.7	14.6	692.1	13.9	97.8
537	83411	5.0	16.1009	0.7	0.9708	2.2	0.1134	2.1	0.94	692.2	13.6	688.9	11.0	677.9	15.7	692.2	13.6	102.1
303	74261	4.8	16.1369	0.9	0.9842	2.4	0.1152	2.3	0.93	702.8	15.1	695.8	12.3	673.1	19.8	702.8	15.1	104.4
414	161666	3.1	15.9014	0.9	1.0043	2.6	0.1158	2.5	0.94	706.5	16.6	706.0	13.4	704.4	18.5	706.5	16.6	100.3
260	314474	4.7	15.7282	0.9	1.0285	2.2	0.1173	2.1	0.91	715.2	13.9	718.2	11.6	727.7	19.3	715.2	13.9	98.3
516	7662	3.4	14.3927	1.9	1.1510	2.7	0.1201	1.9	0.72	731.4	13.4	777.7	14.7	913.0	38.7	731.4	13.4	80.1
644	56277	4.6	15.5612	0.5	1.0664	2.1	0.1204	2.0	0.97	732.6	13.8	737.0	10.8	750.3	11.3	732.6	13.8	97.7
501	169833	4.6	15.7765	0.7	1.0780	1.9	0.1233	1.8	0.92	749.8	12.6	742.6	10.1	721.2	15.7	749.8	12.6	104.0
175	21190	3.8	14.9991	1.0	1.1475	3.3	0.1248	3.2	0.95	758.3	22.6	776.1	18.0	827.5	21.5	758.3	22.6	91.6
225	70270	3.3	14.6754	0.8	1.1734	2.4	0.1249	2.3	0.94	758.7	16.1	788.2	13.2	872.8	17.5	758.7	16.1	86.9
1945	26467	2.1	14.6306	0.6	1.1993	1.9	0.1273	1.8	0.95	772.2	13.4	800.2	10.7	879.2	12.3	772.2	13.4	87.8
52	18373	5.2	15.3710	1.8	1.1462	4.5	0.1278	4.2	0.92	775.2	30.4	775.5	24.5	776.2	37.0	775.2	30.4	99.9
264	117043	3.5	15.2768	1.0	1.1546	3.2	0.1279	3.1	0.96	776.0	22.7	779.4	17.6	789.1	20.0	776.0	22.7	98.3
905	1289433	12.5	15.1273	0.6	1.2139	2.1	0.1332	2.0	0.95	806.0	15.4	807.0	11.9	809.7	13.6	806.0	15.4	99.5
427	86622	8.5	15.0938	0.7	1.2213	2.5	0.1337	2.3	0.95	808.9	17.8	810.4	13.7	814.4	15.6	808.9	17.8	99.3
380	234306	7.4	15.0127	0.8	1.2420	2.3	0.1352	2.1	0.93	817.6	16.1	819.8	12.7	825.6	17.6	817.6	16.1	99.0
566	30195	9.1	14.4062	0.9	1.3081	2.1	0.1367	1.9	0.91	825.9	15.0	849.3	12.3	911.1	18.4	825.9	15.0	90.6
881	122137	3.5	14.7773	0.7	1.2841	2.2	0.1376	2.1	0.95	831.2	16.5	838.7	12.7	858.5	13.8	831.2	16.5	96.8
437	21581	3.4	14.3396	1.3	1.3295	3.1	0.1383	2.8	0.91	834.9	21.8	858.7	17.7	920.6	25.8	834.9	21.8	90.7
626	274539	9.9	14.1278	0.7	1.3605	2.2	0.1394	2.0	0.94	841.3	15.9	872.1	12.6	951.2	15.2	841.3	15.9	88.4
207	347131	4.2	14.5226	0.9	1.3513	2.8	0.1423	2.7	0.94	857.8	21.4	868.1	16.5	894.5	19.6	857.8	21.4	95.9
323	516878	8.5	14.2436	0.9	1.3790	2.5	0.1425	2.3	0.93	858.5	18.8	880.0	14.8	934.4	18.7	858.5	18.8	91.9
611	95000	4.1	14.6866	0.7	1.3398	2.3	0.1427	2.2	0.95	860.0	17.6	863.1	13.4	871.3	14.4	860.0	17.6	98.7
371	89637	3.1	14.8113	0.8	1.3344	2.3	0.1433	2.2	0.94	863.6	17.7	860.8	13.5	853.7	16.6	863.6	17.7	101.2

331	888658	1.9	14.2809	0.7	1.3871	3.0	0.1437	2.9	0.97	865.4	23.4	883.5	17.5	929.0	13.7	865.4	23.4	93.1
1282	95016	21.2	14.3238	0.8	1.3868	2.6	0.1441	2.4	0.95	867.6	19.8	883.3	15.1	922.9	15.8	867.6	19.8	94.0
492	259850	0.8	14.2440	0.6	1.4424	2.2	0.1490	2.1	0.96	895.4	17.5	906.7	13.2	934.4	13.2	934.4	13.2	95.8
432	2081052	2.9	14.2073	0.6	1.5059	2.3	0.1552	2.2	0.96	929.9	18.9	932.8	13.9	939.6	13.3	939.6	13.3	99.0
859	180401	6.5	14.1810	0.7	1.5030	2.0	0.1546	1.9	0.94	926.6	16.6	931.6	12.4	943.5	13.9	943.5	13.9	98.2
288	66065	3.5	14.0295	0.9	1.5208	3.0	0.1547	2.9	0.95	927.5	25.0	938.8	18.6	965.4	18.4	965.4	18.4	96.1
215	90725	4.0	14.0097	0.9	1.6035	2.8	0.1629	2.7	0.95	973.0	24.4	971.6	17.7	968.3	17.5	968.3	17.5	100.5
227	141720	1.8	14.0019	1.0	1.5183	3.3	0.1542	3.1	0.95	924.4	26.7	937.8	20.0	969.4	21.0	969.4	21.0	95.4
170	41432	4.0	13.9833	1.0	1.4506	3.1	0.1471	3.0	0.95	884.8	24.5	910.1	18.8	972.1	20.8	972.1	20.8	91.0
669	533727	19.0	13.9826	0.8	1.4623	2.6	0.1483	2.5	0.95	891.4	20.5	915.0	15.6	972.2	15.7	972.2	15.7	91.7
353	39939	3.0	13.9447	0.8	1.5404	2.5	0.1558	2.4	0.95	933.4	20.9	946.7	15.6	977.8	16.1	977.8	16.1	95.5
218	87000	2.2	13.9354	1.1	1.5196	3.6	0.1536	3.4	0.96	921.0	29.4	938.3	21.9	979.1	21.6	979.1	21.6	94.1
391	23668	1.3	13.9304	0.8	1.5466	2.7	0.1563	2.5	0.95	936.0	22.1	949.2	16.4	979.8	16.7	979.8	16.7	95.5
529	49262	2.0	13.9141	0.5	1.6001	2.1	0.1615	2.0	0.97	965.0	18.3	970.3	13.2	982.3	10.7	982.3	10.7	98.2
438	162016	6.5	13.8935	0.7	1.6288	2.4	0.1641	2.3	0.96	979.7	20.9	981.4	15.1	985.3	13.9	985.3	13.9	99.4
299	54238	2.8	13.8832	0.7	1.5457	2.7	0.1556	2.6	0.97	932.5	22.6	948.8	16.6	986.8	13.7	986.8	13.7	94.5
847	18825	2.5	13.8583	0.7	1.5264	1.9	0.1534	1.8	0.93	920.1	15.3	941.1	11.8	990.4	14.8	990.4	14.8	92.9
106	37514	3.5	13.8248	0.9	1.5941	3.2	0.1598	3.1	0.96	955.9	27.2	967.9	20.0	995.3	19.1	995.3	19.1	96.0
197	46995820	3.9	13.7921	0.8	1.6267	3.0	0.1627	2.9	0.96	971.8	26.0	980.6	18.9	1000.1	17.2	1000.1	17.2	97.2
562	75054	5.2	13.7905	0.7	1.5460	3.5	0.1546	3.4	0.98	926.8	29.5	948.9	21.5	1000.4	14.7	1000.4	14.7	92.7
703	136060	7.4	13.7658	0.7	1.5211	2.4	0.1519	2.3	0.95	911.4	19.8	938.9	15.0	1004.0	14.8	1004.0	14.8	90.8
91	112437	1.7	13.7444	1.2	1.6185	4.1	0.1613	3.9	0.95	964.2	34.9	977.4	25.7	1007.2	25.1	1007.2	25.1	95.7
414	274193	1.8	13.7438	0.9	1.5257	2.8	0.1521	2.7	0.95	912.6	22.6	940.8	17.2	1007.3	17.6	1007.3	17.6	90.6
425	251686	3.9	13.7288	0.6	1.6809	2.1	0.1674	2.0	0.95	997.6	18.3	1001.3	13.2	1009.5	12.6	1009.5	12.6	98.8
29	6850	1.5	13.7193	1.8	1.7248	5.2	0.1716	4.9	0.94	1021.0	46.5	1017.8	33.7	1010.9	36.8	1010.9	36.8	101.0
63	119556	1.1	13.6901	1.2	1.7262	3.6	0.1714	3.3	0.94	1019.8	31.6	1018.3	22.9	1015.2	24.1	1015.2	24.1	100.5
286	18424	2.3	13.6665	1.0	1.4912	2.7	0.1478	2.5	0.93	888.7	20.5	926.8	16.2	1018.7	20.3	1018.7	20.3	87.2
436	153069	3.9	13.6157	0.7	1.6898	2.7	0.1669	2.6	0.96	994.8	23.6	1004.7	17.0	1026.2	15.1	1026.2	15.1	96.9
375	401670	1.5	13.5678	0.8	1.7797	2.8	0.1751	2.7	0.96	1040.3	25.5	1038.1	18.0	1033.3	15.5	1033.3	15.5	100.7
416	50249	3.1	13.5651	0.7	1.6852	2.0	0.1658	1.8	0.93	988.9	16.9	1003.0	12.6	1033.7	14.6	1033.7	14.6	95.7
136	530551	1.6	13.5642	0.8	1.7017	3.4	0.1674	3.4	0.97	997.8	31.0	1009.2	22.0	1033.9	16.2	1033.9	16.2	96.5
530	78636	11.6	13.4953	0.8	1.8351	2.2	0.1796	2.1	0.93	1064.8	20.5	1058.1	14.8	1044.2	16.9	1044.2	16.9	102.0
146	43023	3.6	13.4952	0.8	1.6636	3.3	0.1628	3.2	0.97	972.5	28.9	994.8	20.9	1044.2	15.6	1044.2	15.6	93.1
356	53916	2.2	13.4800	0.7	1.8588	2.7	0.1817	2.6	0.96	1076.4	25.3	1066.6	17.5	1046.5	14.7	1046.5	14.7	102.9
33	7101	3.7	13.4256	1.3	1.8687	4.7	0.1820	4.5	0.96	1077.7	45.0	1070.1	31.3	1054.6	27.0	1054.6	27.0	102.2
721	78669	2.3	13.3724	0.7	1.7846	2.4	0.1731	2.3	0.96	1029.1	22.0	1039.9	15.7	1062.6	14.0	1062.6	14.0	96.8
275	189802	2.7	13.3356	0.7	1.8499	2.6	0.1789	2.5	0.96	1061.1	24.9	1063.4	17.4	1068.2	14.5	1068.2	14.5	99.3
496	60243	7.7	13.2428	0.6	1.9193	2.0	0.1843	1.9	0.96	1090.6	19.0	1087.8	13.2	1082.2	11.3	1082.2	11.3	100.8
495	139307	2.9	13.2159	0.8	1.9059	2.4	0.1827	2.2	0.94	1081.6	22.1	1083.1	15.7	1086.3	15.8	1086.3	15.8	99.6
252	28287	2.3	13.2022	0.8	1.8628	2.9	0.1784	2.7	0.96	1058.0	26.8	1068.0	18.9	1088.3	16.3	1088.3	16.3	97.2

332	73804	3.4	13.1576	0.6	2.0172	2.4	0.1925	2.3	0.96	1134.9	24.4	1121.3	16.5	1095.1	12.8	1095.1	12.8	103.6
1053	200606	3.1	13.1034	0.7	1.9542	2.1	0.1857	2.0	0.95	1098.1	20.3	1099.9	14.3	1103.4	13.8	1103.4	13.8	99.5
192	114482	1.2	12.9945	0.8	1.9569	3.0	0.1844	2.9	0.97	1091.1	28.6	1100.8	19.9	1120.1	15.2	1120.1	15.2	97.4
247	99767	3.0	12.9812	0.8	1.8049	2.5	0.1699	2.4	0.95	1011.7	22.6	1047.2	16.6	1122.1	15.8	1122.1	15.8	90.2
818	38843	3.2	12.9608	0.7	1.9621	2.1	0.1844	2.0	0.95	1091.2	19.8	1102.6	14.0	1125.2	13.1	1125.2	13.1	97.0
536	184250	8.6	12.9530	0.7	1.9835	2.3	0.1863	2.1	0.95	1101.5	21.7	1109.9	15.3	1126.4	14.1	1126.4	14.1	97.8
653	324153	27.9	12.9116	0.8	1.9387	2.6	0.1816	2.5	0.96	1075.4	24.4	1094.6	17.3	1132.8	15.3	1132.8	15.3	94.9
145	26301	4.0	12.9047	1.2	1.8546	3.0	0.1736	2.7	0.91	1031.8	26.0	1065.1	19.8	1133.8	24.7	1133.8	24.7	91.0
416	251708	12.1	12.7070	0.7	2.0735	2.9	0.1911	2.8	0.97	1127.3	28.7	1140.1	19.7	1164.5	14.7	1164.5	14.7	96.8
157	109129	2.2	12.6952	0.8	2.1242	3.0	0.1956	2.8	0.96	1151.6	29.9	1156.7	20.4	1166.3	16.3	1166.3	16.3	98.7
308	232355	1.7	12.6262	0.7	2.2401	2.2	0.2051	2.1	0.95	1202.8	23.4	1193.7	15.7	1177.2	13.4	1177.2	13.4	102.2
215	356968	2.5	12.3801	0.8	2.2494	2.8	0.2020	2.7	0.96	1185.9	29.7	1196.6	20.0	1216.0	15.1	1216.0	15.1	97.5
109	30216	1.8	12.2741	0.9	2.0495	3.7	0.1824	3.6	0.97	1080.3	36.1	1132.1	25.5	1232.9	18.0	1232.9	18.0	87.6
152	161801	1.2	11.4126	0.8	2.8488	2.6	0.2358	2.5	0.95	1364.8	30.8	1368.5	19.7	1374.2	15.1	1374.2	15.1	99.3
154	158268	0.9	10.8925	0.8	3.2211	2.1	0.2545	2.0	0.93	1461.5	25.5	1462.3	16.3	1463.4	14.6	1463.4	14.6	99.9
451	128870	2.9	10.3185	0.6	3.5645	2.1	0.2668	2.0	0.95	1524.3	27.3	1541.7	16.8	1565.5	12.1	1565.5	12.1	97.4
348	308013	3.5	10.2773	0.5	3.6326	2.3	0.2708	2.2	0.97	1544.7	30.6	1556.7	18.2	1573.0	9.8	1573.0	9.8	98.2
351	191261	5.7	10.2567	0.5	3.6537	2.1	0.2718	2.1	0.98	1549.9	28.8	1561.3	17.1	1576.8	8.6	1576.8	8.6	98.3
114	74124	2.2	10.2201	0.7	3.7073	3.1	0.2748	3.0	0.97	1565.1	42.0	1573.0	24.8	1583.5	12.9	1583.5	12.9	98.8
82	147968	2.2	9.4548	0.8	4.3605	3.1	0.2990	3.0	0.97	1686.4	44.1	1704.9	25.4	1727.7	14.2	1727.7	14.2	97.6
284	80584	1.5	9.2588	0.7	4.6353	2.4	0.3113	2.3	0.96	1746.9	35.1	1755.6	19.9	1766.0	12.1	1766.0	12.1	98.9
408	127570	1.3	9.2182	0.7	4.6522	2.6	0.3110	2.5	0.97	1745.8	38.5	1758.7	21.7	1774.0	11.9	1774.0	11.9	98.4
145	173153	1.5	9.1549	0.7	4.5287	3.5	0.3007	3.5	0.98	1694.8	51.6	1736.3	29.3	1786.6	12.3	1786.6	12.3	94.9
228	76709	2.3	8.9592	0.6	5.0094	3.2	0.3255	3.2	0.98	1816.6	50.1	1820.9	27.3	1825.9	10.9	1825.9	10.9	99.5
195	100920	3.2	8.8919	0.8	5.1415	2.8	0.3316	2.7	0.96	1846.0	43.1	1843.0	23.9	1839.6	15.0	1839.6	15.0	100.4
80	150612	0.7	8.6664	0.8	5.1868	3.9	0.3260	3.8	0.98	1819.0	59.9	1850.5	32.8	1885.9	14.0	1885.9	14.0	96.5
124	71019	1.2	8.5884	0.7	5.4703	3.2	0.3407	3.1	0.97	1890.2	50.5	1896.0	27.2	1902.2	13.2	1902.2	13.2	99.4
130	67054	3.8	6.3837	0.6	8.9416	2.8	0.4140	2.7	0.98	2233.1	51.7	2332.1	25.6	2419.8	10.2	2419.8	10.2	92.3
178	675052	1.3	6.3019	0.8	8.2713	2.5	0.3780	2.4	0.94	2067.1	42.1	2261.2	22.8	2441.7	14.1	2441.7	14.1	84.7
94	35848	5.0	5.9915	0.6	9.1089	3.1	0.3958	3.0	0.98	2149.8	55.3	2349.0	28.3	2526.8	10.5	2526.8	10.5	85.1
439	292952	1.8	5.4600	0.7	12.1577	2.3	0.4814	2.2	0.96	2533.5	45.8	2616.6	21.5	2681.6	11.1	2681.6	11.1	94.5
677	2173924	2.7	5.4443	0.6	12.1060	2.0	0.4780	1.9	0.95	2518.6	38.9	2612.7	18.3	2686.4	9.6	2686.4	9.6	93.8
232	153424	1.6	5.3746	0.8	12.4127	3.0	0.4839	2.9	0.97	2544.0	60.3	2636.1	27.9	2707.6	12.4	2707.6	12.4	94.0
208	3179497	2.1	5.3377	0.7	10.3854	2.4	0.4020	2.3	0.96	2178.5	42.5	2469.7	22.2	2719.0	11.3	2719.0	11.3	80.1
106	138314	1.1	5.2390	0.7	11.2617	5.7	0.4279	5.7	0.99	2296.3	109.4	2545.0	53.3	2749.7	11.7	2749.7	11.7	83.5
306	216946	24.9	5.1792	0.7	11.1311	2.9	0.4181	2.8	0.97	2251.9	53.5	2534.2	27.1	2768.6	12.2	2768.6	12.2	81.3
277	5269579	1.5	5.1781	0.7	12.2643	2.4	0.4606	2.3	0.96	2442.2	47.0	2624.8	22.7	2768.9	11.4	2768.9	11.4	88.2
238	88532	1.3	5.1341	0.6	12.9580	2.6	0.4825	2.5	0.97	2538.1	52.9	2676.6	24.5	2782.9	10.6	2782.9	10.6	91.2
97	44716	2.8	4.9449	0.9	14.3968	3.4	0.5163	3.3	0.97	2683.5	72.6	2776.2	32.5	2844.3	14.0	2844.3	14.0	94.3
173	59857	5.5	4.8932	0.6	15.6439	2.8	0.5552	2.7	0.98	2846.7	61.9	2855.3	26.3	2861.4	9.7	2861.4	9.7	99.5
146	152096	0.8	4.8022	0.8	16.3552	3.3	0.5696	3.2	0.97	2906.3	73.8	2897.8	31.1	2891.9	12.8	2891.9	12.8	100.5
132	113558	1.7	3.2035	0.6	28.9795	3.1	0.6733	3.0	0.98	3318.7	78.5	3452.8	30.2	3531.6	8.8	3531.6	8.8	94.0

LIC Red Sandstone

U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
213	93927	3.8	17.3308	0.9	0.6244	2.4	0.0785	2.2	0.93	487.1	10.3	492.6	9.2	518.4	18.9	487.1	10.3	94.0
82	107300	1.4	17.1988	1.0	0.6328	2.8	0.0789	2.6	0.93	489.7	12.2	497.8	10.9	535.2	21.9	489.7	12.2	91.5
108	37985	3.1	17.6301	0.8	0.6214	2.1	0.0795	2.0	0.92	492.9	9.3	490.7	8.3	480.7	17.9	492.9	9.3	102.5
190	59577	3.5	17.4300	0.8	0.6289	2.5	0.0795	2.3	0.94	493.1	11.1	495.4	9.8	505.9	18.6	493.1	11.1	97.5
215	68219	2.5	16.9858	1.0	0.6491	2.2	0.0800	2.0	0.90	495.9	9.6	507.9	8.9	562.4	20.8	495.9	9.6	88.2
378	88261	2.5	16.8120	0.7	0.6566	1.8	0.0801	1.6	0.91	496.5	7.8	512.6	7.2	584.8	15.9	496.5	7.8	84.9
142	31163	2.1	17.0568	1.0	0.6486	2.3	0.0802	2.1	0.91	497.5	10.0	507.6	9.2	553.3	20.8	497.5	10.0	89.9
128	214567	2.1	17.5374	0.8	0.6313	2.2	0.0803	2.1	0.93	497.9	10.0	496.9	8.8	492.3	17.9	497.9	10.0	101.1
212	85103	3.2	17.3374	0.7	0.6392	2.0	0.0804	1.9	0.94	498.4	9.0	501.8	7.9	517.6	15.0	498.4	9.0	96.3
382	144174	4.5	17.4204	0.9	0.6381	1.8	0.0806	1.6	0.88	499.8	7.8	501.1	7.3	507.1	18.9	499.8	7.8	98.6
126	59557	2.6	17.5028	0.7	0.6355	2.5	0.0807	2.4	0.95	500.2	11.4	499.5	9.8	496.7	16.4	500.2	11.4	100.7
320	369173	3.0	17.5480	0.7	0.6345	1.9	0.0808	1.8	0.93	500.6	8.7	498.9	7.6	491.0	15.2	500.6	8.7	102.0
76	30058	1.7	17.3021	0.9	0.6473	1.8	0.0812	1.6	0.89	503.4	7.9	506.8	7.4	522.0	18.7	503.4	7.9	96.4
115	20831	2.8	17.6094	1.0	0.6365	2.3	0.0813	2.0	0.90	503.9	9.9	500.2	9.0	483.3	22.2	503.9	9.9	104.2
212	1369426	2.8	17.3675	0.7	0.6468	1.9	0.0815	1.8	0.93	504.9	8.6	506.5	7.6	513.8	15.6	504.9	8.6	98.3
180	39021	2.9	17.5612	0.8	0.6437	2.2	0.0820	2.1	0.93	508.0	10.2	504.6	8.9	489.4	17.6	508.0	10.2	103.8
181	89559	1.6	17.2169	0.8	0.6608	2.7	0.0825	2.6	0.95	511.1	12.8	515.1	11.0	532.9	17.9	511.1	12.8	95.9
207	244759	0.7	17.2675	0.7	0.6598	2.1	0.0826	2.0	0.94	511.8	9.8	514.5	8.6	526.5	16.3	511.8	9.8	97.2
122	143031	2.3	17.2092	1.1	0.6664	2.8	0.0832	2.5	0.92	515.1	12.6	518.5	11.3	533.8	24.0	515.1	12.6	96.5
125	22279	2.4	17.1291	1.0	0.6722	2.3	0.0835	2.1	0.91	517.0	10.3	522.0	9.3	544.1	20.9	517.0	10.3	95.0
162	409078	3.9	17.2566	0.9	0.6687	2.6	0.0837	2.5	0.94	518.1	12.3	519.9	10.7	527.9	19.8	518.1	12.3	98.1
346	65845	3.6	17.3530	0.8	0.6661	2.4	0.0838	2.2	0.94	519.0	11.0	518.4	9.6	515.6	18.2	519.0	11.0	100.7
101	37331	1.9	17.1997	1.1	0.6783	2.9	0.0846	2.7	0.92	523.6	13.5	525.7	11.9	535.1	24.4	523.6	13.5	97.9
592	66731	10.8	17.2489	0.6	0.6837	1.6	0.0855	1.4	0.92	529.0	7.3	529.0	6.4	528.8	13.6	529.0	7.3	100.0
78	16156	1.9	17.3049	1.3	0.6910	2.4	0.0867	2.1	0.85	536.2	10.7	533.4	10.1	521.7	27.9	536.2	10.7	102.8
268	33354	2.5	17.0884	0.8	0.7082	2.2	0.0878	2.1	0.94	542.4	11.0	543.7	9.5	549.3	16.9	542.4	11.0	98.7
586	93104	5.7	16.9693	0.6	0.7132	1.5	0.0878	1.4	0.93	542.4	7.3	546.7	6.4	564.5	12.2	542.4	7.3	96.1
334	108243	7.9	17.2446	0.7	0.7051	2.3	0.0882	2.2	0.96	544.8	11.2	541.9	9.5	529.4	14.5	544.8	11.2	102.9
68	11698	1.3	17.2346	1.1	0.7081	3.0	0.0885	2.8	0.93	546.7	14.7	543.6	12.7	530.6	24.8	546.7	14.7	103.0
807	39343	7.7	16.6551	0.7	0.7370	1.7	0.0890	1.5	0.92	549.8	8.1	560.7	7.2	605.1	14.2	549.8	8.1	90.9
59	20616	5.0	17.1688	1.2	0.7152	3.2	0.0891	2.9	0.92	549.9	15.4	547.8	13.4	539.0	26.8	549.9	15.4	102.0
836	455394	10.1	17.1481	0.6	0.7165	1.5	0.0891	1.4	0.93	550.3	7.6	548.6	6.5	541.7	12.2	550.3	7.6	101.6
231	512946	4.4	17.0639	0.8	0.7206	1.9	0.0892	1.7	0.91	550.7	9.2	551.0	8.1	552.4	16.9	550.7	9.2	99.7
1228	23332	14.7	16.3036	0.9	0.7563	2.1	0.0894	1.9	0.90	552.2	9.9	571.9	9.2	651.0	19.9	552.2	9.9	84.8
219	71304	1.3	16.9415	0.6	0.7281	1.7	0.0895	1.6	0.93	552.4	8.6	555.5	7.5	568.1	13.6	552.4	8.6	97.2
245	113701	3.1	16.8747	0.9	0.7347	2.4	0.0899	2.2	0.93	555.0	11.8	559.3	10.2	576.6	18.6	555.0	11.8	96.3
213	86825	2.6	16.9523	0.7	0.7396	1.9	0.0909	1.8	0.93	561.1	9.6	562.2	8.3	566.7	15.0	561.1	9.6	99.0
81	26452	1.6	17.0379	0.7	0.7381	3.2	0.0912	3.1	0.98	562.7	16.8	561.3	13.8	555.7	14.4	562.7	16.8	101.2
209	104786	2.7	17.1087	0.7	0.7395	1.8	0.0918	1.7	0.92	565.9	9.0	562.1	7.8	546.6	15.8	565.9	9.0	103.5
67	7881	1.4	17.0738	1.2	0.7419	3.1	0.0919	2.9	0.93	566.6	15.9	563.5	13.6	551.1	25.1	566.6	15.9	102.8

96	45599	3.5	17.0723	0.9	0.7464	2.1	0.0924	1.9	0.91	569.8	10.2	566.1	9.0	551.3	18.8	569.8	10.2	103.4
78	12261	12.1	16.9784	1.2	0.7506	3.1	0.0924	2.9	0.93	569.9	15.7	568.6	13.5	563.3	25.2	569.9	15.7	101.2
111	35479	4.1	17.1068	1.2	0.7461	2.7	0.0926	2.5	0.90	570.7	13.5	566.0	11.8	546.9	25.7	570.7	13.5	104.4
73	24338	0.9	17.0392	1.1	0.7508	2.8	0.0928	2.6	0.92	572.0	14.0	568.7	12.1	555.6	23.6	572.0	14.0	103.0
322	282988	2.3	16.7174	0.8	0.7698	2.5	0.0933	2.4	0.95	575.2	12.9	579.6	10.9	597.0	16.5	575.2	12.9	96.3
395	104436	14.9	16.9552	0.7	0.7610	1.9	0.0936	1.7	0.92	576.7	9.6	574.6	8.2	566.3	15.8	576.7	9.6	101.8
487	745043	2.1	16.9317	0.6	0.7622	1.6	0.0936	1.5	0.92	576.8	8.3	575.3	7.1	569.4	13.5	576.8	8.3	101.3
55	65573	12.9	16.7032	1.0	0.7778	3.4	0.0942	3.2	0.95	580.5	17.8	584.2	15.0	598.8	22.4	580.5	17.8	96.9
219	119598	13.0	16.9179	0.6	0.7706	1.9	0.0945	1.8	0.95	582.4	10.3	580.1	8.6	571.1	13.7	582.4	10.3	102.0
29	39526	1.1	16.8900	1.5	0.7767	4.7	0.0951	4.4	0.94	585.9	24.6	583.6	20.7	574.7	33.7	585.9	24.6	101.9
388	47501	14.8	15.8943	1.1	0.8273	2.3	0.0954	2.1	0.89	587.2	11.6	612.1	10.7	705.4	23.1	587.2	11.6	83.2
207	36317	1.5	16.6575	0.7	0.8089	1.7	0.0977	1.5	0.91	601.0	8.7	601.8	7.6	604.7	14.9	601.0	8.7	99.4
96	100196	8.5	16.8428	0.8	0.8062	2.7	0.0985	2.5	0.95	605.5	14.7	600.3	12.1	580.8	18.1	605.5	14.7	104.3
131	14693	3.7	16.7823	1.0	0.8176	2.3	0.0995	2.1	0.91	611.5	12.4	606.7	10.7	588.6	21.5	611.5	12.4	103.9
242	102412	6.4	15.8994	0.7	0.8643	2.5	0.0997	2.3	0.95	612.5	13.7	632.5	11.6	704.7	15.8	612.5	13.7	86.9
306	52621	4.2	16.7009	0.6	0.8272	1.7	0.1002	1.6	0.94	615.5	9.5	612.0	7.9	599.1	12.9	615.5	9.5	102.7
127	108475	1.8	16.3917	0.7	0.8437	2.5	0.1003	2.4	0.96	616.2	14.1	621.2	11.7	639.5	15.6	616.2	14.1	96.4
57	32955	4.0	16.5547	0.9	0.8367	3.3	0.1005	3.1	0.96	617.1	18.4	617.3	15.1	618.1	20.0	617.1	18.4	99.8
20	36762	2.1	16.6161	1.3	0.8340	4.4	0.1005	4.2	0.95	617.4	24.8	615.8	20.4	610.1	29.0	617.4	24.8	101.2
75	37809	3.2	16.4821	1.4	0.8466	3.3	0.1012	3.0	0.91	621.4	17.9	622.8	15.4	627.6	29.6	621.4	17.9	99.0
808	538439	38.5	16.3721	0.7	0.8547	1.7	0.1015	1.5	0.91	623.1	9.1	627.2	7.9	642.1	15.1	623.1	9.1	97.0
245	62182	0.7	16.4790	0.7	0.8497	2.3	0.1016	2.2	0.95	623.5	12.8	624.5	10.6	628.0	16.0	623.5	12.8	99.3
159	2963930	3.5	16.5885	0.7	0.8468	1.8	0.1019	1.6	0.91	625.4	9.8	622.9	8.4	613.7	16.1	625.4	9.8	101.9
51	42893	2.5	16.3160	1.0	0.8703	3.1	0.1030	3.0	0.94	631.9	17.9	635.7	14.9	649.4	22.3	631.9	17.9	97.3
96	53524	2.1	16.4987	0.8	0.8613	2.4	0.1031	2.3	0.94	632.3	13.7	630.8	11.3	625.4	17.0	632.3	13.7	101.1
50	8157	3.8	16.5352	1.7	0.8667	3.6	0.1039	3.2	0.89	637.4	19.3	633.8	16.9	620.7	35.9	637.4	19.3	102.7
423	145467	1.7	16.3269	0.6	0.8806	1.8	0.1043	1.7	0.94	639.4	10.4	641.3	8.6	648.0	13.4	639.4	10.4	98.7
154	49476	3.0	16.2430	0.8	0.8864	2.8	0.1044	2.7	0.96	640.2	16.7	644.4	13.6	659.1	16.9	640.2	16.7	97.1
118	54603	2.7	16.3361	0.8	0.8892	2.1	0.1053	1.9	0.93	645.7	11.9	645.9	9.9	646.8	16.4	645.7	11.9	99.8
373	357560	242.7	16.1954	0.8	0.8983	2.5	0.1055	2.4	0.95	646.7	14.7	650.8	12.1	665.3	17.2	646.7	14.7	97.2
191	193113	2.7	16.2458	0.7	0.8980	1.8	0.1058	1.6	0.91	648.4	10.1	650.7	8.6	658.6	15.9	648.4	10.1	98.4
138	36955	3.0	16.3779	0.8	0.8931	2.3	0.1061	2.1	0.93	650.0	13.1	648.0	10.9	641.3	17.9	650.0	13.1	101.4
113	75927	2.4	16.1751	0.7	0.9068	2.3	0.1064	2.2	0.96	651.7	13.8	655.3	11.2	668.0	14.7	651.7	13.8	97.6
30	66309	3.1	16.3790	1.3	0.9004	3.4	0.1070	3.2	0.93	655.1	19.9	652.0	16.5	641.2	27.4	655.1	19.9	102.2
368	177790	8.9	16.2045	0.7	0.9284	2.1	0.1091	2.0	0.94	667.6	12.7	666.8	10.3	664.1	15.1	667.6	12.7	100.5
99	22585	2.5	16.3328	1.1	0.9249	2.8	0.1096	2.6	0.92	670.2	16.6	664.9	13.8	647.2	23.9	670.2	16.6	103.5
116	131342	1.7	16.3659	0.6	0.9246	1.5	0.1097	1.4	0.92	671.2	8.9	664.8	7.4	642.9	13.0	671.2	8.9	104.4
249	663522	4.7	16.1273	0.7	0.9385	2.3	0.1098	2.2	0.95	671.4	13.9	672.1	11.2	674.3	14.5	671.4	13.9	99.6
61	11240	3.2	16.1785	1.4	0.9448	3.5	0.1109	3.2	0.92	677.7	20.4	675.4	17.0	667.6	29.2	677.7	20.4	101.5
98	33528	2.2	16.2884	0.8	0.9389	2.5	0.1109	2.4	0.95	678.0	15.5	672.3	12.5	653.0	17.4	678.0	15.5	103.8
395	5935314	2.1	16.1619	0.6	0.9506	1.8	0.1114	1.7	0.94	681.0	11.1	678.4	9.0	669.8	13.3	681.0	11.1	101.7
66	45222	2.4	15.6835	1.2	0.9854	2.9	0.1121	2.6	0.91	684.9	17.2	696.4	14.5	733.7	24.7	684.9	17.2	93.3
21	12252	5.1	15.1573	1.4	1.0312	4.9	0.1134	4.7	0.96	692.2	30.5	719.5	25.1	805.6	29.5	692.2	30.5	85.9

151	32046	2.5	15.4538	0.9	1.0198	2.0	0.1143	1.8	0.89	697.7	12.0	713.8	10.4	764.9	19.4	697.7	12.0	91.2
197	78465	11.2	15.4847	0.9	1.0203	2.6	0.1146	2.4	0.94	699.3	16.2	714.0	13.3	760.7	18.8	699.3	16.2	91.9
169	71095	12.1	15.0053	0.8	1.0537	3.7	0.1147	3.6	0.98	699.8	23.9	730.7	19.2	826.6	16.7	699.8	23.9	84.7
270	1285178	21.4	15.3522	1.3	1.0301	3.4	0.1147	3.2	0.92	700.0	20.9	719.0	17.6	778.7	27.8	700.0	20.9	89.9
65	76604	5.0	16.0428	1.4	0.9900	3.2	0.1152	2.9	0.90	702.8	19.0	698.7	16.0	685.6	29.0	702.8	19.0	102.5
781	177981	7.4	15.0418	0.9	1.0628	2.2	0.1159	2.0	0.91	707.2	13.6	735.2	11.7	821.6	19.3	707.2	13.6	86.1
89	11255	3.2	15.6682	1.0	1.0244	2.7	0.1164	2.5	0.93	709.8	17.1	716.1	14.0	735.8	21.1	709.8	17.1	96.5
826	14031	46.2	14.7732	0.9	1.0896	1.6	0.1167	1.4	0.84	711.8	9.2	748.3	8.6	859.1	18.5	711.8	9.2	82.9
229	169838	8.9	15.6055	0.8	1.0321	2.3	0.1168	2.2	0.94	712.2	14.6	720.0	12.0	744.3	17.3	712.2	14.6	95.7
214	28776	2.7	14.6583	0.9	1.1575	1.9	0.1231	1.7	0.88	748.1	11.9	780.8	10.4	875.3	18.5	748.1	11.9	85.5
148	98556	3.1	14.7107	1.4	1.1576	3.0	0.1235	2.7	0.89	750.7	18.9	780.8	16.4	867.8	28.9	750.7	18.9	86.5
448	765617	25.2	15.6381	0.5	1.0937	1.6	0.1240	1.5	0.94	753.8	11.0	750.3	8.6	739.8	11.3	753.8	11.0	101.9
53	7678	2.3	15.4932	0.9	1.1058	2.8	0.1243	2.6	0.94	755.0	18.5	756.2	14.7	759.5	19.5	755.0	18.5	99.4
264	56522	3.2	15.0889	0.8	1.1383	3.0	0.1246	2.9	0.96	756.8	20.4	771.7	16.0	815.1	16.4	756.8	20.4	92.9
152	615422	16.9	14.3361	0.9	1.2153	2.8	0.1264	2.6	0.94	767.1	18.9	807.6	15.4	921.1	18.8	767.1	18.9	83.3
83	121365	2.4	15.1307	0.9	1.1687	2.5	0.1282	2.3	0.93	777.9	16.7	786.0	13.5	809.2	19.3	777.9	16.7	96.1
265	196570	2.9	15.1793	0.9	1.1922	2.2	0.1313	2.1	0.92	795.0	15.5	797.0	12.4	802.5	18.1	795.0	15.5	99.1
61	35917692	2.8	15.3372	1.1	1.1850	2.4	0.1318	2.2	0.89	798.2	16.3	793.7	13.4	780.8	23.5	798.2	16.3	102.2
350	136717	2.2	14.4890	0.8	1.2581	2.3	0.1322	2.2	0.94	800.5	16.4	827.1	13.2	899.3	17.0	800.5	16.4	89.0
80	37480	2.1	14.7384	0.6	1.2395	3.0	0.1325	2.9	0.98	802.1	21.8	818.7	16.6	864.0	13.4	802.1	21.8	92.8
107	171832	5.9	14.4752	0.9	1.3124	2.6	0.1378	2.5	0.94	832.1	19.2	851.2	15.0	901.2	17.6	832.1	19.2	92.3
65	22522	2.0	15.0910	0.8	1.2885	1.9	0.1410	1.8	0.92	850.5	14.3	840.6	11.1	814.8	15.7	850.5	14.3	104.4
226	237983	3.8	14.2785	1.2	1.3666	2.5	0.1415	2.2	0.88	853.3	17.9	874.7	14.9	929.4	24.5	853.3	17.9	91.8
22	66068	2.3	14.7133	1.2	1.3582	4.3	0.1449	4.1	0.96	872.5	33.4	871.1	24.9	867.5	24.8	872.5	33.4	100.6
74	25396	2.7	14.3815	0.8	1.4128	2.3	0.1474	2.1	0.93	886.1	17.5	894.3	13.5	914.6	16.9	914.6	16.9	96.9
209	55030	6.9	14.3028	0.6	1.4181	2.7	0.1471	2.6	0.97	884.7	21.5	896.5	15.9	925.9	12.9	925.9	12.9	95.5
125	22013	2.3	14.1320	0.7	1.4893	2.3	0.1526	2.2	0.96	915.8	18.5	926.0	13.8	950.5	13.5	950.5	13.5	96.3
47	24188	1.4	14.1236	1.3	1.3804	2.7	0.1414	2.4	0.88	852.6	18.8	880.6	15.8	951.8	26.1	951.8	26.1	89.6
100	117209	4.5	14.0986	0.8	1.3881	2.7	0.1419	2.6	0.96	855.6	20.8	883.9	16.0	955.3	15.6	955.3	15.6	89.6
217	106329	2.2	13.9811	0.7	1.4644	1.8	0.1485	1.7	0.92	892.5	13.8	915.8	10.8	972.4	14.2	972.4	14.2	91.8
276	142148	1.6	13.9658	0.6	1.6570	2.1	0.1678	2.0	0.96	1000.2	18.3	992.2	13.0	974.7	11.7	974.7	11.7	102.6
41	12524	1.3	13.9509	1.3	1.6611	3.7	0.1681	3.5	0.94	1001.5	32.5	993.8	23.7	976.8	26.8	976.8	26.8	102.5
195	156237	3.6	13.8744	0.6	1.6263	2.3	0.1636	2.3	0.96	977.0	20.4	980.4	14.7	988.1	12.6	988.1	12.6	98.9
104	37536	3.0	13.8672	0.9	1.6879	2.8	0.1698	2.7	0.94	1010.8	24.8	1004.0	17.9	989.1	18.8	989.1	18.8	102.2
80	82847	1.9	13.8263	0.8	1.5362	2.5	0.1540	2.4	0.95	923.6	20.3	945.0	15.2	995.1	15.6	995.1	15.6	92.8
120	27941	4.3	13.8024	0.6	1.6318	2.5	0.1634	2.4	0.96	975.4	21.4	982.6	15.5	998.6	13.1	998.6	13.1	97.7
280	68523	2.9	13.8013	0.5	1.7296	1.8	0.1731	1.8	0.96	1029.3	16.7	1019.6	11.7	998.8	10.3	998.8	10.3	103.1
362	4896517	6.6	13.7977	0.6	1.7150	2.2	0.1716	2.1	0.96	1021.1	20.2	1014.2	14.3	999.3	12.2	999.3	12.2	102.2
326	1407991	5.9	13.7556	0.6	1.6806	1.8	0.1677	1.7	0.95	999.2	16.0	1001.2	11.6	1005.5	12.0	1005.5	12.0	99.4
112	59841	2.9	13.7552	0.7	1.6012	2.3	0.1597	2.2	0.95	955.3	19.6	970.7	14.5	1005.6	14.4	1005.6	14.4	95.0
60	56439	3.0	13.7134	0.9	1.6550	3.1	0.1646	2.9	0.96	982.3	26.8	991.5	19.4	1011.8	18.0	1011.8	18.0	97.1
50	16925	3.4	13.7052	1.0	1.6508	3.3	0.1641	3.2	0.96	979.4	28.7	989.9	20.9	1013.0	19.7	1013.0	19.7	96.7
168	531143	10.0	13.6971	0.7	1.6236	1.7	0.1613	1.6	0.92	963.9	14.4	979.4	10.9	1014.2	13.4	1014.2	13.4	95.0

57	16535	1.4	13.6862	0.9	1.7408	2.9	0.1728	2.8	0.95	1027.5	26.5	1023.8	18.9	1015.8	18.3	1015.8	18.3	101.2
176	168124	4.2	13.6688	0.5	1.7539	2.0	0.1739	1.9	0.97	1033.4	18.4	1028.6	12.9	1018.4	9.9	1018.4	9.9	101.5
69	28682	2.9	13.6647	0.8	1.7414	2.3	0.1726	2.1	0.93	1026.3	20.2	1024.0	14.7	1019.0	16.6	1019.0	16.6	100.7
205	170581	13.0	13.6022	0.5	1.8076	1.6	0.1783	1.5	0.95	1057.8	15.1	1048.2	10.6	1028.2	9.7	1028.2	9.7	102.9
151	228266	3.3	13.5993	0.8	1.7641	2.0	0.1740	1.9	0.92	1034.1	18.0	1032.3	13.2	1028.7	15.8	1028.7	15.8	100.5
153	155286	3.9	13.5860	0.7	1.7426	2.3	0.1717	2.2	0.95	1021.5	20.3	1024.4	14.6	1030.6	13.8	1030.6	13.8	99.1
97	175931	2.0	13.5831	0.9	1.6374	2.9	0.1613	2.7	0.95	964.0	24.5	984.7	18.1	1031.1	17.5	1031.1	17.5	93.5
161	359406	4.4	13.5506	0.8	1.8313	2.5	0.1800	2.4	0.95	1066.8	23.2	1056.7	16.4	1035.9	16.4	1035.9	16.4	103.0
172	174072	9.8	13.4949	0.7	1.7591	2.6	0.1722	2.5	0.96	1024.1	23.5	1030.5	16.7	1044.2	14.1	1044.2	14.1	98.1
152	35034	2.1	13.4947	0.7	1.8351	1.8	0.1796	1.7	0.93	1064.8	16.7	1058.1	12.0	1044.3	13.6	1044.3	13.6	102.0
174	58730	2.4	13.4661	0.7	1.7122	1.9	0.1672	1.7	0.92	996.8	15.7	1013.1	11.9	1048.6	15.0	1048.6	15.0	95.1
48	64655	1.6	13.4617	0.7	1.8010	3.2	0.1758	3.1	0.97	1044.2	29.8	1045.8	20.7	1049.2	14.3	1049.2	14.3	99.5
154	105899	5.3	13.4422	0.7	1.6530	1.8	0.1612	1.6	0.92	963.2	14.7	990.7	11.3	1052.2	14.1	1052.2	14.1	91.5
202	71167	6.0	13.4400	0.7	1.8049	2.2	0.1759	2.1	0.95	1044.7	20.1	1047.2	14.3	1052.5	13.2	1052.5	13.2	99.3
386	390323	4.4	13.4326	0.7	1.7591	2.0	0.1714	1.9	0.94	1019.7	17.7	1030.5	12.8	1053.6	13.2	1053.6	13.2	96.8
181	40204	1.9	13.4081	0.7	1.8701	2.5	0.1819	2.4	0.96	1077.1	23.8	1070.6	16.5	1057.3	13.4	1057.3	13.4	101.9
326	141842	11.4	13.3903	0.6	1.8084	1.9	0.1756	1.8	0.95	1043.0	17.5	1048.5	12.6	1059.9	12.2	1059.9	12.2	98.4
258	221689	27.5	13.3768	0.5	1.8277	2.2	0.1773	2.1	0.97	1052.3	20.6	1055.5	14.4	1062.0	10.9	1062.0	10.9	99.1
89	411446	2.4	13.3255	0.7	1.8542	2.1	0.1792	2.0	0.94	1062.6	19.5	1064.9	13.9	1069.7	14.5	1069.7	14.5	99.3
83	107799	3.0	13.2905	1.5	1.8961	2.7	0.1828	2.3	0.84	1082.1	22.8	1079.7	18.2	1075.0	30.2	1075.0	30.2	100.7
114	100823	3.0	13.2795	0.5	1.8814	2.4	0.1812	2.3	0.98	1073.5	22.7	1074.5	15.6	1076.6	10.4	1076.6	10.4	99.7
108	59155	2.6	13.2680	0.7	1.9371	2.1	0.1864	1.9	0.94	1101.9	19.6	1094.0	13.8	1078.4	14.2	1078.4	14.2	102.2
179	221328	2.8	13.2680	0.8	1.9258	2.0	0.1853	1.9	0.93	1096.0	18.8	1090.1	13.4	1078.4	15.1	1078.4	15.1	101.6
152	86107	2.7	13.2643	0.7	1.7751	2.4	0.1708	2.3	0.96	1016.3	21.9	1036.4	15.8	1078.9	14.1	1078.9	14.1	94.2
185	433017	2.9	13.2506	0.5	1.9597	2.1	0.1883	2.1	0.97	1112.3	21.0	1101.8	14.2	1081.0	9.9	1081.0	9.9	102.9
169	158026	2.4	13.2505	0.8	1.8039	2.4	0.1734	2.3	0.95	1030.6	21.8	1046.9	15.8	1081.0	15.5	1081.0	15.5	95.3
389	114561	3.9	13.2013	0.5	1.9143	1.4	0.1833	1.3	0.93	1084.9	12.9	1086.1	9.3	1088.5	10.5	1088.5	10.5	99.7
90	265625	4.7	13.1864	0.5	1.9963	2.3	0.1909	2.2	0.97	1126.3	23.2	1114.3	15.6	1090.7	10.7	1090.7	10.7	103.3
177	169344	3.6	13.1426	0.6	1.8899	1.8	0.1801	1.7	0.94	1067.7	16.7	1077.5	12.1	1097.4	12.9	1097.4	12.9	97.3
87	31331	2.6	13.1338	0.9	1.9449	2.9	0.1853	2.7	0.95	1095.6	27.6	1096.7	19.2	1098.7	17.1	1098.7	17.1	99.7
95	97400	2.7	13.1321	0.7	1.9556	3.0	0.1863	3.0	0.98	1101.1	30.1	1100.4	20.5	1099.0	13.4	1099.0	13.4	100.2
95	144704	3.3	13.1315	0.8	1.9707	2.8	0.1877	2.7	0.96	1108.8	27.1	1105.5	18.6	1099.1	15.4	1099.1	15.4	100.9
70	647490	2.6	13.0992	0.7	1.9017	3.3	0.1807	3.2	0.97	1070.6	31.4	1081.7	21.7	1104.0	14.6	1104.0	14.6	97.0
423	252395	5.5	13.0981	0.6	1.8627	1.7	0.1769	1.6	0.94	1050.3	15.8	1067.9	11.5	1104.2	12.2	1104.2	12.2	95.1
163	621709	4.9	13.0474	0.6	1.9690	2.3	0.1863	2.2	0.97	1101.4	22.3	1105.0	15.4	1111.9	11.9	1111.9	11.9	99.1
170	95287	2.7	13.0144	0.6	1.9717	2.6	0.1861	2.5	0.97	1100.3	25.1	1105.9	17.2	1117.0	11.8	1117.0	11.8	98.5
122	110680	5.2	12.8311	0.6	2.1381	2.4	0.1990	2.3	0.97	1169.8	24.9	1161.2	16.7	1145.3	12.4	1145.3	12.4	102.1
56	25490	6.5	12.8074	0.6	2.1234	2.6	0.1972	2.5	0.97	1160.5	26.9	1156.5	18.1	1148.9	12.7	1148.9	12.7	101.0
489	13126	7.1	12.5277	1.2	1.9281	2.7	0.1752	2.4	0.89	1040.6	23.3	1090.9	18.1	1192.6	24.2	1192.6	24.2	87.3
140	118428	2.6	12.5271	0.8	2.1635	2.9	0.1966	2.8	0.96	1156.8	29.3	1169.4	20.0	1192.7	15.8	1192.7	15.8	97.0
34	27924	1.0	12.5265	0.9	2.2694	3.0	0.2062	2.9	0.96	1208.4	31.7	1202.8	21.2	1192.8	17.0	1192.8	17.0	101.3
19	4762	1.7	12.0019	1.2	2.4299	3.7	0.2115	3.5	0.95	1236.9	39.3	1251.5	26.5	1276.7	23.0	1276.7	23.0	96.9

44	24289	3.3	11.7039	0.9	2.7025	2.8	0.2294	2.6	0.94	1331.3	31.5	1329.1	20.6	1325.6	18.2	1325.6	18.2	100.4
83	224253	3.3	11.6960	1.0	2.5998	2.6	0.2205	2.4	0.93	1284.7	27.6	1300.6	18.8	1326.9	18.6	1326.9	18.6	96.8
80	127409	0.6	11.2932	0.7	2.9950	2.8	0.2453	2.7	0.97	1414.2	34.5	1406.4	21.4	1394.4	14.1	1394.4	14.1	101.4
34	28823	1.1	11.2808	0.8	3.0094	3.8	0.2462	3.7	0.98	1418.9	47.5	1410.0	29.1	1396.5	16.0	1396.5	16.0	101.6
76	43777	0.9	10.8211	0.6	3.2604	3.0	0.2559	3.0	0.98	1468.7	39.0	1471.7	23.5	1475.8	11.3	1475.8	11.3	99.5
262	110226	6.6	10.2775	0.7	3.6906	2.1	0.2751	2.0	0.95	1566.6	28.0	1569.3	16.9	1573.0	12.3	1573.0	12.3	99.6
36	24854	1.6	10.0581	0.7	3.9718	2.7	0.2897	2.6	0.97	1640.2	37.8	1628.5	21.9	1613.3	12.5	1613.3	12.5	101.7
82	779607	1.7	9.9890	0.8	3.5548	2.3	0.2575	2.2	0.94	1477.2	28.8	1539.5	18.3	1626.1	14.2	1626.1	14.2	90.8
63	80728	1.4	9.9445	0.8	3.9961	3.1	0.2882	3.0	0.97	1632.6	43.0	1633.4	25.0	1634.4	14.3	1634.4	14.3	99.9
191	72651	1.1	9.9129	0.5	3.9998	1.5	0.2876	1.4	0.93	1629.4	20.2	1634.2	12.2	1640.3	9.9	1640.3	9.9	99.3
140	59318	4.3	9.7929	0.7	4.0226	2.4	0.2857	2.3	0.96	1620.0	32.5	1638.8	19.3	1662.9	12.6	1662.9	12.6	97.4
281	158253	3.3	9.7817	0.6	4.0340	2.5	0.2862	2.4	0.97	1622.5	34.2	1641.1	20.0	1665.0	10.7	1665.0	10.7	97.4
96	121314	3.6	9.7808	1.1	3.9578	2.9	0.2808	2.7	0.93	1595.1	38.6	1625.6	23.8	1665.2	20.0	1665.2	20.0	95.8
49	29701	4.7	9.6228	1.0	4.3382	3.1	0.3028	2.9	0.95	1705.0	43.4	1700.6	25.2	1695.3	17.8	1695.3	17.8	100.6
226	273316	3.4	9.5532	0.7	4.3081	2.1	0.2985	2.0	0.95	1683.8	30.3	1694.9	17.7	1708.6	12.0	1708.6	12.0	98.5
106	5539506	2.5	9.4177	0.7	4.1927	2.3	0.2864	2.2	0.95	1623.4	32.1	1672.6	19.2	1734.9	12.9	1734.9	12.9	93.6
309	92313	15.8	9.3307	0.5	4.4200	1.9	0.2991	1.8	0.96	1686.9	27.4	1716.1	15.9	1751.9	9.6	1751.9	9.6	96.3
70	48777	2.5	9.3089	0.8	4.7221	2.8	0.3188	2.7	0.96	1783.9	42.6	1771.2	23.8	1756.2	14.0	1756.2	14.0	101.6
109	266109	3.2	9.2619	0.6	4.7056	2.8	0.3161	2.7	0.98	1770.6	41.7	1768.2	23.1	1765.4	10.4	1765.4	10.4	100.3
97	106444	1.1	8.7369	0.6	5.3448	2.8	0.3387	2.7	0.98	1880.3	44.2	1876.1	23.7	1871.3	10.3	1871.3	10.3	100.5
59	180201	1.0	8.7085	0.8	5.5229	3.0	0.3488	2.9	0.96	1929.0	48.8	1904.2	26.1	1877.2	14.6	1877.2	14.6	102.8
447	638168	3.5	8.4199	0.6	4.7210	2.6	0.2883	2.6	0.97	1633.0	37.1	1771.0	22.2	1937.7	10.9	1937.7	10.9	84.3
180	133181	1.9	6.1030	0.7	10.1970	2.1	0.4513	2.0	0.94	2401.2	40.0	2452.8	19.5	2495.8	11.7	2495.8	11.7	96.2
217	22479677	3.6	5.6302	0.6	12.1090	2.0	0.4945	1.9	0.95	2589.9	41.4	2612.9	19.1	2630.7	10.3	2630.7	10.3	98.5

Granite

U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
266	63415	1.6	17.0966	1.0	0.6523	3.0	0.0809	2.9	0.95	501.4	13.9	509.9	12.2	548.2	21.7	501.4	13.9	91.5
1012	84308	2.4	17.3880	1.0	0.6433	2.5	0.0811	2.3	0.91	502.8	10.9	504.3	9.8	511.2	22.2	502.8	10.9	98.4
459	38610	1.9	17.1928	0.8	0.6511	2.8	0.0812	2.7	0.96	503.2	13.0	509.2	11.3	535.9	17.5	503.2	13.0	93.9
521	21976	2.1	17.3288	0.8	0.6470	2.5	0.0813	2.3	0.94	504.0	11.2	506.6	9.8	518.7	17.7	504.0	11.2	97.2
947	143596	3.7	17.2892	0.9	0.6492	2.7	0.0814	2.5	0.95	504.5	12.4	508.0	10.7	523.7	18.9	504.5	12.4	96.3
685	76044	2.2	17.3590	0.9	0.6476	2.5	0.0815	2.3	0.93	505.2	11.3	507.0	9.9	514.8	19.4	505.2	11.3	98.1
255	180082	2.0	17.4505	1.1	0.6460	2.9	0.0818	2.7	0.92	506.6	13.0	506.0	11.5	503.3	24.4	506.6	13.0	100.7
373	251018	2.2	17.3712	0.8	0.6500	3.5	0.0819	3.4	0.97	507.4	16.6	508.5	14.0	513.3	17.7	507.4	16.6	98.8
217	25364	2.2	16.9758	1.3	0.6655	2.9	0.0819	2.6	0.89	507.7	12.7	518.0	11.8	563.7	29.0	507.7	12.7	90.1
797	63336	2.2	17.4171	0.9	0.6488	2.4	0.0820	2.2	0.93	507.8	10.7	507.7	9.4	507.5	19.2	507.8	10.7	100.1
526	97116	2.2	17.3438	0.7	0.6518	2.5	0.0820	2.4	0.96	508.0	11.9	509.6	10.1	516.8	15.2	508.0	11.9	98.3
687	5512347	2.3	17.2222	0.8	0.6571	2.3	0.0821	2.1	0.94	508.5	10.5	512.8	9.2	532.2	17.7	508.5	10.5	95.5
192	29338	1.8	17.4790	1.2	0.6477	3.3	0.0821	3.0	0.93	508.7	14.9	507.1	13.1	499.7	26.6	508.7	14.9	101.8
575	120099	2.5	17.2135	0.8	0.6622	2.5	0.0827	2.4	0.94	512.1	11.8	516.0	10.3	533.3	18.6	512.1	11.8	96.0
193	14160	1.8	17.4226	1.2	0.6545	3.4	0.0827	3.1	0.94	512.3	15.5	511.3	13.5	506.8	25.8	512.3	15.5	101.1
405	227852	2.5	17.2677	0.8	0.6620	2.4	0.0829	2.3	0.94	513.5	11.3	515.9	9.9	526.4	18.6	513.5	11.3	97.5
586	82700	2.0	17.1892	0.9	0.6653	2.7	0.0829	2.6	0.95	513.6	12.8	517.8	11.1	536.4	18.9	513.6	12.8	95.8
239	133620	1.1	17.3174	1.0	0.6604	2.9	0.0829	2.7	0.93	513.7	13.4	514.9	11.7	520.1	22.8	513.7	13.4	98.8
670	48623	2.0	17.5118	0.9	0.6552	2.4	0.0832	2.2	0.92	515.3	10.9	511.7	9.6	495.6	20.6	515.3	10.9	104.0
176	112727	1.8	17.1355	1.3	0.6699	4.0	0.0833	3.7	0.94	515.5	18.4	520.7	16.1	543.3	29.2	515.5	18.4	94.9
1781	24583	1.2	16.8734	1.1	0.6884	2.5	0.0843	2.3	0.91	521.4	11.5	531.9	10.5	576.9	23.0	521.4	11.5	90.4
549	361805	2.1	17.3202	1.2	0.6718	2.7	0.0844	2.4	0.90	522.3	12.0	521.8	10.9	519.7	25.7	522.3	12.0	100.5
274	24124	1.4	17.3749	0.9	0.6716	3.2	0.0846	3.0	0.96	523.7	15.3	521.7	13.0	512.8	20.4	523.7	15.3	102.1
241	43271	2.5	13.6290	0.8	1.7432	2.9	0.1723	2.8	0.96	1024.9	26.5	1024.7	18.8	1024.2	16.0	1024.2	16.0	100.1

Recovery Glacier Rocks

Whichaway Nunataks Bedrock

U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
427	72757	26.5	17.2801	1.0	0.6183	2.9	0.0775	2.7	0.94	481.1	12.6	488.8	11.2	524.8	22.3	481.1	12.6	91.7
143	15763	1.0	17.5164	0.7	0.6146	2.8	0.0781	2.7	0.96	484.6	12.8	486.5	11.0	495.0	16.5	484.6	12.8	97.9
700	50948	61.9	17.2201	0.7	0.6300	2.5	0.0787	2.4	0.96	488.2	11.4	496.1	9.9	532.5	15.0	488.2	11.4	91.7
904	267396	179.8	17.0241	1.0	0.6463	5.6	0.0798	5.5	0.98	494.9	26.2	506.2	22.3	557.5	22.4	494.9	26.2	88.8
1199	37854	41.5	16.9074	0.7	0.6590	2.4	0.0808	2.3	0.95	501.0	11.0	514.0	9.7	572.5	15.7	501.0	11.0	87.5
208	39362	1.5	17.4694	0.8	0.6387	3.4	0.0809	3.3	0.97	501.7	15.8	501.5	13.4	500.9	17.8	501.7	15.8	100.1
1616	138889	12.8	17.1872	0.6	0.6500	1.8	0.0810	1.7	0.94	502.2	8.1	508.5	7.1	536.7	12.9	502.2	8.1	93.6
418	746872	1.6	17.1153	0.9	0.6543	2.3	0.0812	2.2	0.93	503.4	10.4	511.1	9.3	545.8	19.0	503.4	10.4	92.2
75	99205	1.7	16.6546	1.1	0.6747	3.7	0.0815	3.6	0.95	505.1	17.4	523.6	15.3	605.1	24.5	505.1	17.4	83.5
224	74327	1.1	17.3976	1.0	0.6506	3.1	0.0821	3.0	0.95	508.6	14.5	508.8	12.6	510.0	22.6	508.6	14.5	99.7
432	304457	1.7	17.5021	0.7	0.6484	2.4	0.0823	2.3	0.96	509.9	11.2	507.5	9.5	496.8	15.2	509.9	11.2	102.6
89	47003	1.2	17.1137	1.5	0.6643	3.4	0.0825	3.1	0.90	510.8	15.1	517.3	13.8	546.0	32.3	510.8	15.1	93.5
307	35953	29.2	16.5164	0.8	0.6896	2.4	0.0826	2.2	0.93	511.7	10.8	532.6	9.8	623.1	18.3	511.7	10.8	82.1
148	28373	1.9	17.0022	1.0	0.6704	2.9	0.0827	2.8	0.94	512.0	13.6	521.0	11.9	560.3	22.0	512.0	13.6	91.4
873	81270	2.9	17.4016	0.8	0.6551	2.4	0.0827	2.3	0.94	512.1	11.1	511.6	9.6	509.4	17.8	512.1	11.1	100.5
309	50547	2.6	16.9313	0.8	0.6733	2.6	0.0827	2.5	0.95	512.1	12.2	522.7	10.7	569.4	17.4	512.1	12.2	89.9
1268	55154	29.3	16.9444	0.7	0.6730	2.1	0.0827	2.0	0.94	512.3	10.0	522.5	8.8	567.7	15.6	512.3	10.0	90.2
431	1248285	76.5	17.2526	0.8	0.6624	2.4	0.0829	2.3	0.94	513.3	11.3	516.1	9.9	528.4	18.1	513.3	11.3	97.2
550	256014	1.1	17.3741	1.1	0.6582	3.0	0.0829	2.8	0.93	513.6	13.9	513.5	12.2	512.9	24.5	513.6	13.9	100.1
562	3509258	4.6	17.2311	0.8	0.6637	2.2	0.0829	2.0	0.93	513.7	10.0	516.9	8.8	531.1	17.5	513.7	10.0	96.7
870	41934	6.9	16.4739	1.1	0.6950	2.1	0.0830	1.7	0.83	514.2	8.4	535.8	8.5	628.7	24.7	514.2	8.4	81.8
117	52444	2.6	16.9509	1.0	0.6787	3.0	0.0834	2.8	0.94	516.6	13.9	526.0	12.2	566.9	21.9	516.6	13.9	91.1
241	139580	3.7	17.1510	1.1	0.6720	2.9	0.0836	2.7	0.93	517.5	13.6	521.9	11.9	541.3	23.1	517.5	13.6	95.6
179	203460	8.5	17.1725	1.1	0.6712	3.1	0.0836	2.9	0.94	517.6	14.4	521.5	12.6	538.5	23.5	517.6	14.4	96.1
276	84962	2.5	17.1563	1.0	0.6735	3.3	0.0838	3.2	0.96	518.8	15.9	522.9	13.6	540.6	21.0	518.8	15.9	96.0
188	70899	0.8	16.8993	1.0	0.6844	2.6	0.0839	2.4	0.92	519.2	12.1	529.4	10.9	573.5	22.4	519.2	12.1	90.5
129	35544	1.3	16.9672	1.2	0.6823	3.0	0.0840	2.7	0.92	519.7	13.6	528.2	12.2	564.8	25.4	519.7	13.6	92.0
180	45592	2.3	16.9922	0.9	0.6819	2.5	0.0840	2.3	0.92	520.2	11.3	527.9	10.1	561.6	20.3	520.2	11.3	92.6
593	70908	2.3	17.2288	0.9	0.6726	2.4	0.0840	2.2	0.93	520.2	11.1	522.3	9.7	531.4	19.3	520.2	11.1	97.9
219	14504	2.4	16.9777	1.7	0.6827	3.4	0.0841	2.9	0.87	520.4	14.7	528.4	14.0	563.4	36.8	520.4	14.7	92.4
404	44514	2.4	17.4031	0.8	0.6666	2.5	0.0841	2.4	0.95	520.8	11.8	518.7	10.1	509.3	16.7	520.8	11.8	102.3
102	25843	2.5	17.2706	1.2	0.6724	3.1	0.0842	2.9	0.92	521.3	14.4	522.2	12.8	526.1	27.3	521.3	14.4	99.1
266	32483	1.2	17.2450	1.0	0.6739	3.0	0.0843	2.8	0.94	521.6	14.1	523.1	12.3	529.3	22.8	521.6	14.1	98.5
158	16784	1.9	17.4005	1.1	0.6685	3.2	0.0844	3.0	0.93	522.1	15.1	519.8	13.1	509.6	25.1	522.1	15.1	102.5
106	44674	1.4	16.9507	1.1	0.6877	3.4	0.0846	3.2	0.95	523.2	16.1	531.4	14.0	566.9	23.0	523.2	16.1	92.3
116	23418	2.2	16.9468	1.2	0.6885	3.4	0.0846	3.1	0.94	523.6	15.8	531.9	13.9	567.4	25.8	523.6	15.8	92.3
76	28977	3.3	17.0704	1.5	0.6837	4.2	0.0846	3.9	0.93	523.8	19.8	529.0	17.4	551.5	32.7	523.8	19.8	95.0
160	183490	5.0	17.0854	1.1	0.6832	2.7	0.0847	2.4	0.91	523.9	12.1	528.7	10.9	549.6	24.6	523.9	12.1	95.3
671	47077	7.9	17.3342	0.7	0.6744	2.2	0.0848	2.1	0.96	524.6	10.6	523.4	9.0	518.0	14.3	524.6	10.6	101.3

118	71912	1.4	17.2469	1.1	0.6782	3.1	0.0848	2.9	0.93	524.9	14.5	525.7	12.6	529.1	24.4	524.9	14.5	99.2
462	37816	3.0	17.1425	0.9	0.6831	2.3	0.0849	2.1	0.92	525.4	10.4	528.6	9.3	542.3	19.7	525.4	10.4	96.9
203	51959	1.7	17.2155	1.2	0.6805	2.9	0.0850	2.7	0.91	525.7	13.4	527.0	12.0	533.1	26.6	525.7	13.4	98.6
200	62855	2.6	16.9081	0.9	0.6936	2.9	0.0851	2.8	0.96	526.2	14.1	535.0	12.1	572.4	18.6	526.2	14.1	91.9
374	45361	2.0	17.2931	0.8	0.6808	2.2	0.0854	2.1	0.94	528.2	10.7	527.2	9.2	523.2	16.7	528.2	10.7	101.0
407	34262	2.1	17.2743	0.8	0.6835	2.5	0.0856	2.4	0.95	529.6	12.1	528.9	10.3	525.6	16.7	529.6	12.1	100.8
137	14513	1.6	16.7641	1.3	0.7049	3.5	0.0857	3.2	0.93	530.1	16.5	541.7	14.6	590.9	27.5	530.1	16.5	89.7
143	15479	2.6	17.4039	1.0	0.6793	3.4	0.0858	3.2	0.95	530.4	16.5	526.4	14.0	509.2	23.0	530.4	16.5	104.2
547	92561	2.2	17.3423	0.8	0.6818	2.4	0.0858	2.2	0.95	530.4	11.4	527.9	9.7	516.9	16.9	530.4	11.4	102.6
75	60303	5.8	17.0251	1.3	0.6947	3.8	0.0858	3.6	0.94	530.5	18.3	535.6	15.9	557.4	28.7	530.5	18.3	95.2
152	41281	1.5	17.2427	1.3	0.6864	3.0	0.0858	2.6	0.89	530.9	13.5	530.6	12.2	529.6	29.3	530.9	13.5	100.2
346	45806	1.8	17.1311	1.3	0.6917	2.8	0.0859	2.5	0.89	531.5	12.8	533.8	11.7	543.8	28.1	531.5	12.8	97.7
1394	341070	2.7	17.1698	0.8	0.6909	2.2	0.0860	2.0	0.93	532.0	10.4	533.3	9.1	538.9	17.2	532.0	10.4	98.7
43	6418	2.3	17.1328	2.1	0.6933	4.4	0.0862	3.9	0.89	532.7	20.1	534.8	18.4	543.6	45.0	532.7	20.1	98.0
175	42012	3.2	16.8717	1.1	0.7056	2.8	0.0863	2.6	0.93	533.9	13.3	542.1	11.8	577.1	23.1	533.9	13.3	92.5
442	51162	2.1	17.2774	0.7	0.6894	2.3	0.0864	2.2	0.95	534.2	11.4	532.5	9.7	525.2	15.9	534.2	11.4	101.7
450	63306	1.4	17.0360	0.8	0.6993	2.4	0.0864	2.3	0.94	534.2	11.6	538.4	10.0	556.0	18.3	534.2	11.6	96.1
55	942408	2.2	16.4477	1.2	0.7265	4.5	0.0867	4.3	0.97	535.8	22.2	554.5	19.1	632.1	25.1	535.8	22.2	84.8
743	65831	3.3	17.2995	0.8	0.6909	2.7	0.0867	2.6	0.96	535.9	13.2	533.3	11.1	522.4	16.6	535.9	13.2	102.6
93	6624	3.5	16.6756	1.0	0.7179	3.3	0.0868	3.1	0.95	536.7	16.0	549.4	13.9	602.4	22.6	536.7	16.0	89.1
243	23055	1.7	17.3501	1.1	0.6909	2.9	0.0869	2.6	0.92	537.4	13.6	533.4	11.9	516.0	24.5	537.4	13.6	104.2
412	770732	1.3	17.2166	0.9	0.6971	2.2	0.0870	2.0	0.92	538.0	10.4	537.0	9.1	532.9	18.8	538.0	10.4	101.0
263	74451	3.3	17.1939	1.0	0.6992	2.6	0.0872	2.5	0.93	538.9	12.7	538.3	11.0	535.8	21.1	538.9	12.7	100.6
560	61608	5.4	17.1446	0.7	0.7019	2.2	0.0873	2.1	0.94	539.4	10.6	539.9	9.2	542.1	16.4	539.4	10.6	99.5
424	100505	3.6	16.9880	0.8	0.7090	3.3	0.0874	3.2	0.97	539.9	16.8	544.1	14.1	562.1	17.6	539.9	16.8	96.0
596	24940	29.8	16.9463	0.7	0.7120	2.8	0.0875	2.7	0.97	540.8	14.3	545.9	12.0	567.5	15.2	540.8	14.3	95.3
348	43564	6.1	17.0330	1.1	0.7086	3.0	0.0875	2.8	0.93	541.0	14.6	543.9	12.7	556.3	23.4	541.0	14.6	97.2
142	7288	80.9	16.9469	0.9	0.7124	3.4	0.0876	3.3	0.97	541.1	17.1	546.2	14.4	567.4	19.4	541.1	17.1	95.4
269	86688	2.8	17.1381	0.8	0.7070	2.7	0.0879	2.6	0.96	543.0	13.6	543.0	11.5	542.9	17.4	543.0	13.6	100.0
292	26692	5.1	17.0329	0.8	0.7136	2.3	0.0882	2.1	0.94	544.6	11.1	546.9	9.6	556.3	17.1	544.6	11.1	97.9
422	20381	5.1	16.9438	0.8	0.7190	2.1	0.0884	1.9	0.92	545.8	10.2	550.1	9.0	567.8	18.4	545.8	10.2	96.1
385	47232	4.4	17.0129	0.8	0.7161	2.8	0.0884	2.7	0.96	545.8	13.9	548.4	11.8	558.9	17.2	545.8	13.9	97.7
515	64442	4.5	16.6743	0.9	0.7310	2.6	0.0884	2.5	0.94	546.1	12.9	557.1	11.2	602.6	19.2	546.1	12.9	90.6
125	27797	1.5	17.2668	1.2	0.7069	3.5	0.0885	3.3	0.94	546.8	17.4	542.9	14.8	526.6	26.1	546.8	17.4	103.8
1000	146280	12.6	17.2766	0.7	0.7067	2.2	0.0885	2.1	0.95	546.9	11.0	542.8	9.3	525.3	15.7	546.9	11.0	104.1
891	64963	7.8	17.0680	0.7	0.7185	2.3	0.0889	2.2	0.96	549.3	11.7	549.8	9.8	551.8	14.8	549.3	11.7	99.5
1564	62111	6.4	17.0288	0.8	0.7205	1.7	0.0890	1.6	0.90	549.5	8.2	550.9	7.3	556.9	16.4	549.5	8.2	98.7
201	28039	3.5	17.0924	1.0	0.7189	4.9	0.0891	4.8	0.98	550.3	25.1	550.0	20.7	548.8	22.3	550.3	25.1	100.3
810	181981	2.3	17.0850	0.7	0.7199	2.0	0.0892	1.9	0.94	550.8	10.1	550.6	8.7	549.7	15.5	550.8	10.1	100.2
198	40229	2.1	17.0685	0.9	0.7211	3.0	0.0893	2.8	0.95	551.2	15.0	551.3	12.7	551.8	19.7	551.2	15.0	99.9
409	76547	7.5	16.9053	0.8	0.7287	2.7	0.0893	2.6	0.96	551.7	13.7	555.8	11.6	572.7	17.1	551.7	13.7	96.3
205	37796	9.0	17.0809	1.0	0.7227	3.3	0.0895	3.2	0.96	552.8	16.9	552.3	14.3	550.2	21.5	552.8	16.9	100.5

404	71563	4.7	17.1094	0.9	0.7216	2.6	0.0895	2.4	0.94	552.8	12.8	551.6	10.9	546.6	18.7	552.8	12.8	101.1
619	18984	9.2	16.3978	0.9	0.7533	2.3	0.0896	2.2	0.92	553.1	11.5	570.1	10.2	638.7	19.5	553.1	11.5	86.6
303	73080	5.4	16.7573	1.0	0.7386	2.9	0.0898	2.7	0.94	554.2	14.5	561.6	12.5	591.8	21.3	554.2	14.5	93.6
190	18821	1.8	16.9083	0.9	0.7332	2.7	0.0899	2.6	0.95	555.0	13.8	558.4	11.8	572.3	19.2	555.0	13.8	97.0
390	373669	11.7	16.8952	0.6	0.7348	2.8	0.0900	2.7	0.98	555.7	14.4	559.3	11.9	574.0	13.0	555.7	14.4	96.8
406	632906	3.0	16.8313	0.8	0.7406	2.5	0.0904	2.4	0.95	557.9	12.6	562.7	10.7	582.3	16.9	557.9	12.6	95.8
598	194111	2.5	17.0313	0.9	0.7331	2.6	0.0906	2.4	0.94	558.8	12.9	558.4	11.0	556.6	18.9	558.8	12.9	100.4
754	62966	7.6	16.9469	0.9	0.7369	2.3	0.0906	2.1	0.93	558.9	11.4	560.6	9.9	567.4	18.6	558.9	11.4	98.5
402	34616	6.1	16.0131	0.9	0.7808	2.6	0.0907	2.4	0.94	559.6	12.9	585.9	11.4	689.5	18.1	559.6	12.9	81.2
409	68693	2.5	16.8781	0.9	0.7432	2.8	0.0910	2.6	0.94	561.3	14.2	564.3	12.1	576.2	20.6	561.3	14.2	97.4
602	49294	10.9	16.5662	1.1	0.7579	3.0	0.0911	2.8	0.93	561.8	15.1	572.8	13.2	616.6	23.8	561.8	15.1	91.1
64	21999	0.5	16.4022	1.8	0.7662	3.8	0.0911	3.4	0.89	562.3	18.3	577.6	16.9	638.1	38.0	562.3	18.3	88.1
237	48792	5.9	16.9339	0.9	0.7439	2.8	0.0914	2.7	0.94	563.6	14.4	564.7	12.2	569.1	20.2	563.6	14.4	99.0
949	1009240	2.8	16.9698	0.8	0.7436	2.5	0.0915	2.3	0.94	564.5	12.5	564.5	10.6	564.4	17.5	564.5	12.5	100.0
82	22663	3.9	17.0053	1.4	0.7423	3.5	0.0916	3.2	0.92	564.7	17.6	563.8	15.3	559.9	30.8	564.7	17.6	100.9
324	304902	2.9	16.8799	0.9	0.7490	2.8	0.0917	2.7	0.94	565.6	14.4	567.6	12.3	576.0	20.2	565.6	14.4	98.2
140	13784	5.2	17.1355	1.4	0.7400	3.3	0.0920	3.0	0.91	567.1	16.3	562.4	14.2	543.3	29.7	567.1	16.3	104.4
543	33450	9.8	16.8199	0.8	0.7542	2.2	0.0920	2.0	0.92	567.4	10.8	570.7	9.4	583.7	18.2	567.4	10.8	97.2
974	574886	26.9	17.0340	1.0	0.7450	2.6	0.0920	2.4	0.93	567.6	13.1	565.3	11.2	556.2	20.9	567.6	13.1	102.0
757	225100	25.5	16.8437	0.8	0.7544	2.3	0.0922	2.1	0.93	568.3	11.7	570.8	10.0	580.7	17.8	568.3	11.7	97.9
180	43816	3.4	16.7175	1.2	0.7605	3.1	0.0922	2.9	0.92	568.6	15.6	574.3	13.6	597.0	26.1	568.6	15.6	95.2
971	73251	3.6	16.8197	0.7	0.7563	2.4	0.0923	2.3	0.95	568.9	12.5	571.9	10.5	583.7	15.8	568.9	12.5	97.4
341	46877	3.5	17.0121	1.0	0.7485	3.1	0.0923	2.9	0.95	569.4	15.9	567.3	13.3	559.0	20.8	569.4	15.9	101.9
84	26701	0.6	16.5370	1.1	0.7730	3.0	0.0927	2.8	0.93	571.5	15.1	581.5	13.2	620.4	24.2	571.5	15.1	92.1
103	668478	3.2	16.8545	1.2	0.7588	3.9	0.0928	3.7	0.95	571.8	20.0	573.3	16.9	579.3	26.9	571.8	20.0	98.7
234	25088	1.7	16.9446	0.7	0.7566	2.7	0.0930	2.6	0.96	573.1	14.1	572.0	11.7	567.7	16.3	573.1	14.1	101.0
167	25936	1.6	16.4825	1.0	0.7817	3.3	0.0934	3.2	0.95	575.9	17.4	586.5	14.8	627.5	22.5	575.9	17.4	91.8
372	156808	9.5	16.3460	0.9	0.7883	2.2	0.0935	2.0	0.92	575.9	11.2	590.2	9.9	645.5	19.0	575.9	11.2	89.2
268	45387	6.7	16.4596	1.0	0.7856	3.0	0.0938	2.8	0.94	577.9	15.3	588.7	13.2	630.6	22.1	577.9	15.3	91.6
289	132974	1.7	16.4495	1.0	0.7875	2.6	0.0940	2.4	0.92	578.9	13.4	589.8	11.8	631.9	22.0	578.9	13.4	91.6
277	609247	2.5	16.7237	1.0	0.7768	3.3	0.0942	3.1	0.95	580.4	17.4	583.7	14.6	596.2	22.6	580.4	17.4	97.4
361	25077	11.3	16.0949	1.2	0.8122	4.3	0.0948	4.1	0.96	583.9	22.9	603.7	19.4	678.6	24.9	583.9	22.9	86.0
386	57248	2.6	16.8648	0.8	0.7772	2.9	0.0951	2.8	0.97	585.4	15.7	583.9	12.9	577.9	16.4	585.4	15.7	101.3
508	24941	4.1	16.6004	0.8	0.7918	2.5	0.0953	2.3	0.95	587.0	13.1	592.2	11.1	612.2	16.7	587.0	13.1	95.9
273	24270	3.6	16.7092	1.1	0.7920	3.5	0.0960	3.3	0.95	590.8	18.6	592.3	15.5	598.1	22.9	590.8	18.6	98.8
711	131765	2.2	16.8684	0.6	0.7876	2.4	0.0964	2.4	0.97	593.0	13.4	589.8	10.9	577.5	13.0	593.0	13.4	102.7
812	105162	2.2	16.6721	0.7	0.7975	2.1	0.0964	1.9	0.93	593.5	10.9	595.4	9.3	602.8	15.9	593.5	10.9	98.4
148	10436	2.8	16.0945	1.2	0.8275	3.1	0.0966	2.9	0.92	594.4	16.4	612.2	14.4	678.7	26.5	594.4	16.4	87.6
358	374331	1.1	16.7166	0.8	0.7974	2.5	0.0967	2.3	0.95	594.9	13.3	595.4	11.1	597.1	17.0	594.9	13.3	99.6
26	6604	3.2	15.6262	3.1	0.8539	8.5	0.0968	7.9	0.93	595.5	45.0	626.8	39.7	741.5	65.4	595.5	45.0	80.3
405	31855	55.3	16.5958	0.8	0.8087	2.4	0.0973	2.3	0.95	598.8	13.0	601.7	10.9	612.8	16.3	598.8	13.0	97.7
569	185808	12.0	16.6465	0.8	0.8068	2.5	0.0974	2.4	0.95	599.2	13.8	600.7	11.6	606.2	17.4	599.2	13.8	98.9

334	108753	2.5	16.5402	0.9	0.8179	2.8	0.0981	2.7	0.94	603.4	15.3	606.9	12.8	620.0	20.1	603.4	15.3	97.3
325	54581	3.2	15.5361	0.9	0.8718	2.6	0.0982	2.4	0.94	604.0	14.0	636.5	12.2	753.7	18.0	604.0	14.0	80.1
114	37676	9.6	16.6409	1.0	0.8170	3.5	0.0986	3.4	0.96	606.3	19.6	606.4	16.2	606.9	21.8	606.3	19.6	99.9
498	59756	5.3	16.7748	0.8	0.8111	2.8	0.0987	2.7	0.96	606.7	15.4	603.1	12.6	589.6	17.8	606.7	15.4	102.9
912	15495	8.4	15.6205	0.9	0.8729	2.1	0.0989	1.9	0.91	607.9	11.1	637.1	10.0	742.2	18.8	607.9	11.1	81.9
447	612575	10.7	16.1657	1.2	0.8436	3.3	0.0989	3.1	0.94	608.0	18.1	621.1	15.5	669.3	24.7	608.0	18.1	90.9
163	25098	2.3	16.2145	1.0	0.8447	3.0	0.0993	2.9	0.94	610.5	16.6	621.7	14.1	662.8	21.4	610.5	16.6	92.1
1346	199175	76.2	16.6996	0.9	0.8203	2.4	0.0994	2.2	0.93	610.6	13.1	608.2	11.0	599.3	18.7	610.6	13.1	101.9
109	14609	1.7	16.7862	1.2	0.8202	3.2	0.0999	3.0	0.92	613.5	17.5	608.1	14.8	588.1	26.8	613.5	17.5	104.3
279	468048	2.8	16.0789	0.8	0.8590	2.8	0.1002	2.6	0.95	615.4	15.4	629.6	12.9	680.7	18.0	615.4	15.4	90.4
335	86771	2.5	16.1766	0.9	0.8556	2.9	0.1004	2.7	0.95	616.6	16.1	627.7	13.5	667.8	18.6	616.6	16.1	92.3
534	42480	5.3	16.5436	0.7	0.8391	1.7	0.1007	1.5	0.92	618.4	9.0	618.7	7.7	619.6	14.4	618.4	9.0	99.8
823	211411	2.2	16.5237	0.8	0.8444	3.0	0.1012	2.9	0.97	621.4	17.3	621.6	14.1	622.2	17.2	621.4	17.3	99.9
2223	54820	59.3	16.1962	0.7	0.8673	2.2	0.1019	2.1	0.95	625.4	12.3	634.1	10.2	665.2	14.8	625.4	12.3	94.0
181	80295	3.1	16.5245	1.1	0.8511	2.6	0.1020	2.4	0.91	626.1	14.3	625.2	12.4	622.1	24.1	626.1	14.3	100.6
178	1044393	1.0	16.3684	0.9	0.8625	3.1	0.1024	2.9	0.96	628.4	17.6	631.5	14.4	642.5	19.0	628.4	17.6	97.8
976	182636	6.3	16.3679	0.8	0.8643	2.2	0.1026	2.1	0.94	629.6	12.3	632.5	10.3	642.6	16.1	629.6	12.3	98.0
192	68715	2.6	15.6880	0.9	0.9039	3.5	0.1029	3.4	0.96	631.1	20.3	653.8	16.9	733.1	20.0	631.1	20.3	86.1
146	214695	1.4	16.4308	0.8	0.8631	2.5	0.1029	2.3	0.94	631.1	14.1	631.8	11.7	634.4	18.3	631.1	14.1	99.5
758	233347	12.5	16.4383	0.8	0.8683	2.3	0.1035	2.2	0.93	635.0	13.2	634.7	11.0	633.4	17.9	635.0	13.2	100.3
267	166522	4.5	16.3708	0.8	0.8730	2.8	0.1037	2.7	0.96	635.8	16.6	637.2	13.5	642.2	16.3	635.8	16.6	99.0
527	123099	4.5	15.6724	1.4	0.9142	3.9	0.1039	3.6	0.93	637.3	22.1	659.3	18.9	735.2	29.7	637.3	22.1	86.7
260	87225	4.5	16.2990	0.9	0.8914	2.3	0.1054	2.2	0.93	645.8	13.3	647.1	11.1	651.7	18.5	645.8	13.3	99.1
209	160418	3.5	15.6263	1.0	0.9307	3.5	0.1055	3.4	0.96	646.4	20.9	668.0	17.3	741.4	20.4	646.4	20.9	87.2
278	62674	3.4	16.5567	1.1	0.8805	2.6	0.1057	2.4	0.91	647.9	14.5	641.2	12.3	617.9	23.1	647.9	14.5	104.9
394	75596	9.2	15.8532	0.9	0.9225	3.3	0.1061	3.2	0.96	649.9	19.9	663.7	16.3	710.9	19.1	649.9	19.9	91.4
230	1017808	4.9	16.1009	0.6	0.9167	2.7	0.1071	2.6	0.97	655.6	16.4	660.6	13.1	677.9	13.6	655.6	16.4	96.7
384	93324	4.1	16.2012	0.7	0.9152	2.2	0.1075	2.1	0.95	658.4	13.1	659.8	10.7	664.6	14.8	658.4	13.1	99.1
420	80236	7.1	15.2825	0.7	0.9703	2.4	0.1075	2.3	0.96	658.5	14.2	688.6	11.9	788.3	14.2	658.5	14.2	83.5
1330	101535	7.4	16.1988	0.7	0.9191	2.0	0.1080	1.9	0.94	661.0	12.0	661.9	9.9	664.9	14.2	661.0	12.0	99.4
270	502942	0.7	15.8974	0.8	0.9368	2.6	0.1080	2.4	0.95	661.2	15.2	671.2	12.5	705.0	16.9	661.2	15.2	93.8
456	31292	4.8	15.3291	1.7	0.9753	4.1	0.1084	3.7	0.91	663.6	23.3	691.2	20.4	781.9	35.6	663.6	23.3	84.9
260	530348	8.6	16.1114	0.9	0.9315	5.1	0.1088	5.0	0.98	666.0	31.5	668.4	24.8	676.5	20.0	666.0	31.5	98.5
473	82757	1.4	16.0767	0.9	0.9413	2.9	0.1098	2.8	0.95	671.3	17.7	673.6	14.4	681.0	19.4	671.3	17.7	98.6
190	110030	2.3	15.9248	1.0	0.9503	3.3	0.1098	3.1	0.95	671.4	20.0	678.3	16.3	701.3	21.4	671.4	20.0	95.7
290	224766	3.2	15.5315	0.9	0.9776	3.2	0.1101	3.0	0.96	673.5	19.3	692.4	15.8	754.3	19.0	673.5	19.3	89.3
524	817348	6.7	15.4560	0.8	0.9838	2.8	0.1103	2.6	0.96	674.4	17.0	695.5	13.9	764.6	16.2	674.4	17.0	88.2
368	42516	3.4	15.7318	1.0	0.9712	3.2	0.1108	3.0	0.95	677.5	19.6	689.1	16.0	727.2	20.8	677.5	19.6	93.2
538	82687	9.8	16.0129	1.0	0.9631	2.3	0.1119	2.0	0.90	683.5	13.1	684.9	11.2	689.5	21.4	683.5	13.1	99.1
387	65358	3.0	16.0321	1.0	0.9645	3.0	0.1121	2.9	0.95	685.2	18.5	685.6	15.0	687.0	20.8	685.2	18.5	99.7
263	120202	5.0	15.7903	1.0	0.9822	3.0	0.1125	2.8	0.94	687.2	18.3	694.7	15.1	719.3	22.2	687.2	18.3	95.5
538	55806	5.1	16.1115	0.7	0.9627	2.0	0.1125	1.8	0.93	687.2	11.9	684.7	9.8	676.5	15.7	687.2	11.9	101.6
948	164875	2.3	15.8192	0.7	0.9857	2.2	0.1131	2.1	0.95	690.7	13.7	696.5	11.1	715.4	15.2	690.7	13.7	96.5

616	63843	24.7	15.9774	1.0	0.9801	2.8	0.1136	2.6	0.93	693.5	17.1	693.7	14.1	694.2	22.0	693.5	17.1	99.9
355	76699	3.1	14.8934	1.2	1.0557	4.2	0.1140	4.0	0.96	696.1	26.6	731.7	21.8	842.3	24.0	696.1	26.6	82.7
457	299630	2.6	15.8710	0.6	0.9929	1.6	0.1143	1.5	0.94	697.6	10.0	700.2	8.2	708.5	12.1	697.6	10.0	98.5
266	57763	1.7	15.6230	0.8	1.0131	3.4	0.1148	3.3	0.97	700.5	21.7	710.4	17.3	741.9	17.8	700.5	21.7	94.4
406	116854	6.1	14.8116	2.3	1.0790	4.2	0.1159	3.6	0.84	707.0	23.9	743.2	22.3	853.7	47.3	707.0	23.9	82.8
328	6319097	2.3	15.8167	0.7	1.0137	2.5	0.1163	2.4	0.96	709.1	16.0	710.7	12.7	715.8	15.3	709.1	16.0	99.1
266	61741	6.8	14.7809	1.9	1.0851	5.5	0.1163	5.1	0.94	709.4	34.5	746.1	28.9	858.0	39.1	709.4	34.5	82.7
207	14127	2.6	14.9412	1.4	1.0920	3.1	0.1183	2.8	0.89	720.9	18.8	749.5	16.4	835.6	29.3	720.9	18.8	86.3
171	33352	2.0	14.7443	0.9	1.1100	2.9	0.1187	2.7	0.94	723.1	18.6	758.2	15.4	863.2	19.5	723.1	18.6	83.8
574	74083	2.7	15.2931	1.0	1.0713	2.6	0.1188	2.4	0.93	723.8	16.8	739.4	13.8	786.9	20.2	723.8	16.8	92.0
605	139288	28.1	15.2242	1.0	1.0821	2.6	0.1195	2.4	0.93	727.6	16.6	744.7	13.7	796.3	20.0	727.6	16.6	91.4
393	41387	15.5	14.6205	0.9	1.1419	3.1	0.1211	2.9	0.95	736.8	20.2	773.4	16.5	880.6	19.4	736.8	20.2	83.7
277	71894	2.1	14.8152	0.8	1.1407	2.4	0.1226	2.3	0.94	745.3	15.9	772.8	13.1	853.2	17.5	745.3	15.9	87.4
540	188085	5.1	14.8197	1.0	1.1512	3.2	0.1237	3.0	0.95	752.0	21.5	777.8	17.3	852.6	20.1	752.0	21.5	88.2
337	49025	2.7	15.3889	0.8	1.1218	2.9	0.1252	2.8	0.96	760.4	19.7	763.8	15.3	773.7	16.1	760.4	19.7	98.3
295	67014	1.2	14.4908	1.1	1.2068	3.1	0.1268	2.9	0.93	769.7	20.8	803.7	17.1	899.0	22.7	769.7	20.8	85.6
343	208148	2.4	14.6440	0.9	1.1947	2.7	0.1269	2.6	0.94	770.1	18.6	798.1	15.0	877.3	19.0	770.1	18.6	87.8
542	15562	6.0	14.3644	1.8	1.2259	4.9	0.1277	4.5	0.93	774.8	33.2	812.5	27.3	917.1	36.7	774.8	33.2	84.5
610	140790	4.1	14.7325	0.8	1.2221	2.7	0.1306	2.6	0.95	791.2	19.2	810.7	15.1	864.8	17.1	791.2	19.2	91.5
1071	1172403	14.4	14.9459	0.8	1.2225	2.4	0.1325	2.2	0.94	802.2	16.8	810.9	13.2	834.9	16.5	802.2	16.8	96.1
164	56288	2.0	14.3521	0.9	1.2813	3.1	0.1334	3.0	0.96	807.1	22.5	837.4	17.6	918.8	17.8	807.1	22.5	87.8
425	21200	2.7	14.0898	1.2	1.3056	6.0	0.1334	5.9	0.98	807.4	45.1	848.2	34.8	956.6	23.7	807.4	45.1	84.4
41	8544	3.1	15.0531	1.9	1.2514	5.0	0.1366	4.7	0.93	825.5	36.1	824.0	28.3	820.0	38.9	825.5	36.1	100.7
591	210549	3.7	14.1557	0.8	1.3625	2.5	0.1399	2.3	0.95	844.0	18.4	872.9	14.4	947.1	15.7	844.0	18.4	89.1
264	671016	2.0	14.4290	1.0	1.3373	3.2	0.1399	3.0	0.95	844.4	23.9	862.1	18.4	907.8	20.3	844.4	23.9	93.0
328	128080	7.5	14.9347	1.0	1.2924	3.8	0.1400	3.6	0.97	844.6	28.9	842.4	21.6	836.5	19.8	844.6	28.9	101.0
214	81960	2.3	14.9323	0.8	1.2964	2.5	0.1404	2.4	0.95	846.9	19.3	844.1	14.6	836.8	16.2	846.9	19.3	101.2
363	108055	4.4	14.8584	0.7	1.3031	2.4	0.1404	2.3	0.96	847.1	18.0	847.1	13.6	847.2	13.8	847.1	18.0	100.0
639	89721	4.0	14.7077	0.7	1.3245	2.4	0.1413	2.3	0.96	851.9	18.5	856.5	13.9	868.3	13.9	851.9	18.5	98.1
127	13106	3.0	14.0779	1.7	1.5065	5.0	0.1538	4.7	0.94	922.3	40.6	933.0	30.7	958.4	35.7	958.4	35.7	96.2
472	64910	1.7	14.0765	1.1	1.3933	3.7	0.1422	3.5	0.95	857.3	28.1	886.1	21.7	958.6	22.7	958.6	22.7	89.4
63	10545	1.5	14.0484	1.3	1.5163	4.2	0.1545	4.0	0.95	926.1	34.9	937.0	25.9	962.7	25.9	962.7	25.9	96.2
61	389389	6.2	13.9861	1.1	1.6375	4.0	0.1661	3.9	0.96	990.6	35.6	984.7	25.4	971.7	22.8	971.7	22.8	101.9
244	107677	3.4	13.9255	0.7	1.6111	2.5	0.1627	2.4	0.96	971.9	21.8	974.5	15.8	980.6	15.1	980.6	15.1	99.1
75	9188	2.6	13.9144	0.9	1.5270	3.8	0.1541	3.7	0.97	923.9	31.9	941.3	23.4	982.2	18.0	982.2	18.0	94.1
617	245947	4.4	13.8947	1.6	1.3640	3.9	0.1375	3.6	0.91	830.3	28.0	873.6	23.1	985.1	33.4	985.1	33.4	84.3
631	805280	11.4	13.8496	0.8	1.6686	2.6	0.1676	2.4	0.95	998.9	22.4	996.7	16.2	991.7	16.5	991.7	16.5	100.7
72	46295	2.4	13.8265	1.0	1.4656	3.5	0.1470	3.4	0.96	883.9	27.7	916.3	21.1	995.1	20.3	995.1	20.3	88.8
533	418475	4.7	13.8095	1.0	1.4344	3.0	0.1437	2.9	0.95	865.3	23.3	903.4	18.2	997.6	20.0	997.6	20.0	86.7
317	33576	3.8	13.7557	2.1	1.3837	3.7	0.1380	3.0	0.81	833.6	23.3	882.0	21.6	1005.5	43.1	1005.5	43.1	82.9
321	12237	3.3	13.7414	1.1	1.3466	3.1	0.1342	2.9	0.93	811.8	22.0	866.1	18.1	1007.6	23.0	1007.6	23.0	80.6
73	128916	4.4	13.6804	1.0	1.4801	4.0	0.1469	3.9	0.97	883.3	32.1	922.3	24.4	1016.6	21.2	1016.6	21.2	86.9
1410	550390	22.4	13.6388	0.7	1.6832	2.2	0.1665	2.1	0.95	992.8	19.6	1002.2	14.2	1022.8	13.4	1022.8	13.4	97.1

544	618227	13.4	13.5443	1.0	1.6427	2.7	0.1614	2.6	0.94	964.4	22.9	986.7	17.2	1036.9	19.4	1036.9	19.4	93.0
358	70544	2.8	13.5278	0.7	1.6121	2.8	0.1582	2.7	0.96	946.6	23.7	974.9	17.5	1039.3	15.0	1039.3	15.0	91.1
390	108225	3.8	13.4673	0.9	1.8732	3.1	0.1830	3.0	0.96	1083.1	29.6	1071.7	20.5	1048.4	17.7	1048.4	17.7	103.3
134	31076	4.8	13.4671	0.9	1.6924	3.3	0.1653	3.2	0.96	986.2	29.1	1005.7	21.1	1048.4	18.2	1048.4	18.2	94.1
682	71517	17.9	13.4591	0.6	1.6789	2.0	0.1639	1.9	0.95	978.3	17.0	1000.6	12.5	1049.6	11.8	1049.6	11.8	93.2
457	236719	3.9	13.4247	0.9	1.8185	2.8	0.1771	2.7	0.94	1050.9	26.0	1052.1	18.6	1054.8	18.7	1054.8	18.7	99.6
100	14587	4.1	13.3920	1.0	1.8351	3.9	0.1782	3.8	0.97	1057.3	37.2	1058.1	26.0	1059.7	20.5	1059.7	20.5	99.8
432	488191	7.0	13.2836	0.7	1.8726	2.5	0.1804	2.4	0.96	1069.2	23.5	1071.5	16.4	1076.0	13.9	1076.0	13.9	99.4
195	108175	1.4	13.2764	0.8	1.8475	3.2	0.1779	3.1	0.97	1055.5	30.2	1062.6	21.1	1077.1	16.7	1077.1	16.7	98.0
1082	58367	18.1	13.2757	0.8	1.8409	2.4	0.1773	2.2	0.94	1052.0	21.7	1060.2	15.6	1077.2	16.4	1077.2	16.4	97.7
253	40191	6.4	13.2580	0.8	1.8060	2.5	0.1737	2.4	0.95	1032.2	22.5	1047.6	16.3	1079.9	16.1	1079.9	16.1	95.6
241	45577	2.4	13.1797	0.7	1.8800	3.0	0.1797	3.0	0.97	1065.4	29.0	1074.1	20.1	1091.7	13.8	1091.7	13.8	97.6
121	42364	1.2	13.1743	0.9	1.8808	3.5	0.1797	3.3	0.96	1065.4	32.7	1074.3	22.9	1092.6	18.7	1092.6	18.7	97.5
140	50232	1.3	13.1717	0.8	1.8587	3.0	0.1776	2.8	0.96	1053.6	27.7	1066.5	19.6	1092.9	16.9	1092.9	16.9	96.4
1058	39766	2.8	13.0499	0.6	1.8526	2.5	0.1753	2.4	0.97	1041.5	23.6	1064.3	16.7	1111.5	12.6	1111.5	12.6	93.7
374	284804	1.3	12.9016	0.8	1.8624	2.4	0.1743	2.2	0.94	1035.6	21.3	1067.9	15.6	1134.3	15.9	1134.3	15.9	91.3
739	52791	2.6	12.7455	0.7	2.2337	2.2	0.2065	2.0	0.95	1210.0	22.5	1191.7	15.1	1158.5	13.5	1158.5	13.5	104.4
216	191812	2.1	12.6371	0.8	2.1231	2.7	0.1946	2.6	0.96	1146.2	27.6	1156.3	19.0	1175.5	16.0	1175.5	16.0	97.5
335	90829	1.0	12.5982	0.9	2.1039	2.8	0.1922	2.6	0.95	1133.5	27.3	1150.1	19.1	1181.6	17.6	1181.6	17.6	95.9
345	661004	11.2	12.5949	0.8	2.1975	2.7	0.2007	2.6	0.95	1179.3	27.8	1180.2	18.9	1182.1	16.1	1182.1	16.1	99.8
637	1444021	2.5	12.5289	0.7	2.1871	2.4	0.1987	2.3	0.95	1168.5	24.4	1176.9	16.7	1192.4	14.7	1192.4	14.7	98.0
201	76922	0.5	11.4136	0.8	2.8658	2.7	0.2372	2.6	0.96	1372.3	32.3	1373.0	20.5	1374.0	15.0	1374.0	15.0	99.9
191	851009	0.7	11.3405	0.6	2.8753	2.8	0.2365	2.7	0.98	1368.4	33.7	1375.5	21.1	1386.4	11.1	1386.4	11.1	98.7
420	475894	2.0	11.1800	0.8	2.7016	2.6	0.2191	2.5	0.95	1276.9	28.6	1328.9	19.3	1413.7	16.2	1413.7	16.2	90.3
304	107661	8.0	11.0331	0.9	2.9882	2.6	0.2391	2.4	0.94	1382.1	30.1	1404.6	19.5	1439.0	16.3	1439.0	16.3	96.0
464	126324	4.0	10.8948	1.2	2.7711	2.6	0.2190	2.3	0.89	1276.4	27.0	1347.8	19.4	1463.0	22.1	1463.0	22.1	87.2
279	8862	0.6	10.8875	0.8	2.8250	2.8	0.2231	2.7	0.95	1298.1	31.4	1362.2	21.0	1464.2	16.0	1464.2	16.0	88.7
133	271411	2.2	10.3194	1.4	3.0893	4.8	0.2312	4.6	0.96	1340.8	55.9	1430.0	36.9	1565.4	25.3	1565.4	25.3	85.7
49	13062	1.9	9.8954	1.0	3.9217	3.0	0.2815	2.8	0.94	1598.7	40.3	1618.2	24.5	1643.6	19.4	1643.6	19.4	97.3
483	598129	4.6	9.7785	0.8	4.0176	4.7	0.2849	4.7	0.99	1616.1	66.8	1637.8	38.6	1665.6	15.0	1665.6	15.0	97.0
235	80609	1.2	9.7447	0.8	4.2898	2.7	0.3032	2.6	0.95	1707.1	38.5	1691.4	22.2	1672.0	15.1	1672.0	15.1	102.1
1142	537647	21.5	9.6861	1.1	4.2696	2.7	0.2999	2.5	0.92	1691.0	37.6	1687.5	22.5	1683.2	19.4	1683.2	19.4	100.5
516	53627	20.8	9.6092	0.6	3.9700	1.9	0.2767	1.8	0.95	1574.6	25.7	1628.1	15.8	1697.9	11.6	1697.9	11.6	92.7
1125	745497	9.8	9.6039	0.6	4.3086	2.4	0.3001	2.3	0.97	1691.8	34.9	1695.0	20.0	1698.9	11.3	1698.9	11.3	99.6
266	485872	1.1	9.5906	0.7	4.3870	2.3	0.3051	2.2	0.95	1716.8	33.0	1709.9	19.0	1701.4	12.7	1701.4	12.7	100.9
215	181397	2.7	9.4347	0.9	4.4134	2.6	0.3020	2.4	0.93	1701.2	35.9	1714.9	21.3	1731.6	17.0	1731.6	17.0	98.2
253	65562	2.3	9.3957	0.9	4.4422	2.4	0.3027	2.3	0.93	1704.7	33.8	1720.2	20.0	1739.2	15.7	1739.2	15.7	98.0
298	346284	1.6	9.3359	0.7	4.0651	2.7	0.2753	2.6	0.96	1567.4	36.4	1647.3	22.2	1750.9	13.5	1750.9	13.5	89.5
183	135051	3.2	9.3312	0.7	4.4002	3.9	0.2978	3.8	0.98	1680.3	56.6	1712.4	32.2	1751.8	13.6	1751.8	13.6	95.9
567	276041	5.9	9.3227	0.7	4.1598	2.6	0.2813	2.5	0.97	1597.7	35.5	1666.1	21.2	1753.4	12.1	1753.4	12.1	91.1
449	115282	8.4	9.3205	0.8	4.5984	2.6	0.3108	2.5	0.95	1744.9	38.2	1749.0	21.9	1753.9	14.8	1753.9	14.8	99.5
615	173577	51.3	9.3174	0.8	4.2167	2.9	0.2849	2.8	0.96	1616.2	39.8	1677.3	23.7	1754.5	14.3	1754.5	14.3	92.1
619	13693048	1.9	9.3107	0.7	4.5647	1.9	0.3082	1.7	0.92	1732.1	26.2	1742.9	15.6	1755.8	13.6	1755.8	13.6	98.6

284	198593	5.7	9.2947	0.7	4.6361	2.0	0.3125	1.9	0.94	1753.1	28.7	1755.8	16.7	1759.0	12.9	1759.0	12.9	99.7
260	85910	2.2	9.2534	0.8	4.6233	2.8	0.3103	2.7	0.96	1742.1	41.5	1753.5	23.6	1767.1	14.1	1767.1	14.1	98.6
438	472130	5.2	9.2513	0.8	4.5615	2.3	0.3061	2.2	0.94	1721.3	33.3	1742.3	19.5	1767.5	14.3	1767.5	14.3	97.4
131	26611	1.9	9.2126	0.9	4.6179	2.9	0.3086	2.7	0.95	1733.6	41.7	1752.5	24.1	1775.2	16.2	1775.2	16.2	97.7
315	213114	1.8	9.1145	0.7	4.7413	2.8	0.3134	2.7	0.97	1757.5	41.4	1774.6	23.4	1794.7	12.9	1794.7	12.9	97.9
344	129385	3.5	9.0504	0.9	4.7876	3.1	0.3143	3.0	0.96	1761.6	45.7	1782.7	26.0	1807.5	16.1	1807.5	16.1	97.5
313	187650	2.7	9.0199	0.8	4.8120	2.8	0.3148	2.7	0.96	1764.3	41.0	1787.0	23.3	1813.6	14.0	1813.6	14.0	97.3
494	2311784	4.2	9.0171	0.7	4.7553	2.1	0.3110	2.0	0.95	1745.6	30.1	1777.0	17.4	1814.2	12.0	1814.2	12.0	96.2
417	286339	2.4	8.9958	0.9	5.0162	2.6	0.3273	2.4	0.94	1825.2	38.1	1822.1	21.7	1818.5	16.4	1818.5	16.4	100.4
701	31138	3.4	8.9123	0.7	4.8306	2.5	0.3122	2.4	0.96	1751.7	36.8	1790.2	20.9	1835.4	12.1	1835.4	12.1	95.4
349	225068	1.7	6.4385	0.7	9.1776	2.4	0.4286	2.3	0.96	2299.2	44.9	2355.9	22.1	2405.3	11.2	2405.3	11.2	95.6
655	188762	9.5	6.3962	0.8	8.7098	2.3	0.4040	2.2	0.94	2187.6	40.5	2308.1	21.0	2416.5	12.8	2416.5	12.8	90.5
303	149401	1.2	6.1306	0.9	10.4178	3.4	0.4632	3.2	0.96	2453.7	66.2	2472.6	31.3	2488.2	15.8	2488.2	15.8	98.6
1791	182254	20.9	5.3793	0.7	12.5979	2.0	0.4915	1.9	0.93	2577.2	40.1	2650.1	19.0	2706.2	11.9	2706.2	11.9	95.2
108	121737	0.8	4.7332	0.8	16.7190	3.1	0.5739	3.0	0.97	2924.0	70.6	2918.9	29.8	2915.3	12.9	2915.3	12.9	100.3

Stephenson Bastion Bedrock

U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
135	761093	1.2	10.9562	0.8	3.2933	2.8	0.2617	2.7	0.96	1498.5	35.6	1479.5	21.6	1452.3	14.7	1452.3	14.7	103.2
70	167705	1.5	10.8622	0.6	3.3128	2.9	0.2610	2.8	0.98	1494.9	38.0	1484.1	22.7	1468.7	11.1	1468.7	11.1	101.8
94	833717	1.0	10.8031	0.8	3.1958	3.1	0.2504	2.9	0.96	1440.5	38.1	1456.2	23.7	1479.0	15.7	1479.0	15.7	97.4
163	173378	1.6	10.7763	0.6	3.1750	2.9	0.2481	2.8	0.98	1428.9	36.2	1451.1	22.3	1483.7	11.4	1483.7	11.4	96.3
118	71211	1.2	10.7604	0.9	3.3057	2.8	0.2580	2.7	0.95	1479.5	35.2	1482.4	22.0	1486.5	17.3	1486.5	17.3	99.5
140	12476	1.0	10.7368	1.0	2.8836	2.1	0.2246	1.9	0.89	1305.9	22.6	1377.6	16.2	1490.7	18.3	1490.7	18.3	87.6
235	60475	1.4	10.7357	0.7	3.2752	2.9	0.2550	2.8	0.97	1464.3	36.4	1475.2	22.2	1490.9	12.4	1490.9	12.4	98.2
154	12041	2.0	10.6104	1.0	3.1172	3.0	0.2399	2.8	0.95	1386.1	35.2	1436.9	23.0	1513.1	18.4	1513.1	18.4	91.6
136	101625	1.9	10.4543	0.7	3.5937	2.6	0.2725	2.5	0.96	1553.4	34.5	1548.1	20.7	1541.0	14.1	1541.0	14.1	100.8
206	81391	0.9	10.4005	0.6	3.6635	1.8	0.2763	1.7	0.95	1572.9	24.2	1563.4	14.6	1550.7	11.0	1550.7	11.0	101.4
146	61641	1.0	10.3707	0.7	3.5534	3.0	0.2673	2.9	0.97	1526.9	39.2	1539.2	23.5	1556.1	12.8	1556.1	12.8	98.1
179	35972	1.2	10.3556	0.7	3.6298	2.7	0.2726	2.6	0.97	1554.1	35.9	1556.1	21.4	1558.8	12.6	1558.8	12.6	99.7
351	49463	4.5	10.3552	0.7	3.4858	1.9	0.2618	1.8	0.94	1499.0	24.2	1524.0	15.2	1558.9	12.4	1558.9	12.4	96.2
110	39414	2.2	10.3469	0.8	3.5442	2.7	0.2660	2.6	0.96	1520.3	35.2	1537.1	21.6	1560.4	15.1	1560.4	15.1	97.4
147	22083	1.6	10.3416	0.7	3.5524	3.1	0.2664	3.0	0.97	1522.7	40.3	1539.0	24.2	1561.3	13.3	1561.3	13.3	97.5
201	26038	1.1	10.3310	0.7	3.4613	2.4	0.2593	2.3	0.96	1486.5	30.4	1518.4	18.9	1563.3	12.9	1563.3	12.9	95.1
274	75955	1.7	10.2980	0.6	3.4975	3.0	0.2612	3.0	0.98	1496.1	39.6	1526.7	23.9	1569.3	11.8	1569.3	11.8	95.3
285	81551	0.8	10.2671	0.5	3.7071	2.4	0.2760	2.3	0.97	1571.4	32.1	1572.9	18.9	1574.9	10.3	1574.9	10.3	99.8
182	14789	0.9	10.2131	0.6	3.3103	3.7	0.2452	3.7	0.99	1413.7	46.5	1483.5	29.0	1584.7	11.2	1584.7	11.2	89.2
192	175321	0.9	10.1977	0.7	3.8083	2.4	0.2817	2.3	0.96	1599.7	32.8	1594.5	19.4	1587.6	12.4	1587.6	12.4	100.8
88	33992	1.4	10.1569	1.0	3.2357	3.8	0.2384	3.7	0.96	1378.2	45.8	1465.8	29.7	1595.0	19.2	1595.0	19.2	86.4
121	332595	2.1	10.1536	0.7	3.7132	3.2	0.2734	3.1	0.97	1558.3	42.6	1574.2	25.3	1595.7	13.8	1595.7	13.8	97.7
104	12122	1.1	10.1271	1.0	3.5719	4.5	0.2624	4.4	0.97	1501.9	58.9	1543.3	35.8	1600.5	19.1	1600.5	19.1	93.8
147	31467	1.3	10.1204	0.6	3.8764	2.5	0.2845	2.4	0.97	1614.1	34.3	1608.8	20.0	1601.8	11.6	1601.8	11.6	100.8
95	62315	1.0	10.1128	0.7	3.8899	2.8	0.2853	2.7	0.96	1618.0	38.6	1611.6	22.6	1603.2	13.8	1603.2	13.8	100.9
43	8912	1.7	10.1115	0.9	4.0555	3.1	0.2974	3.0	0.96	1678.5	44.5	1645.4	25.6	1603.4	16.4	1603.4	16.4	104.7
74	44600	1.2	10.0990	0.8	3.8903	3.0	0.2849	2.9	0.97	1616.2	42.0	1611.7	24.5	1605.7	14.1	1605.7	14.1	100.7
302	53590	1.9	10.0760	0.8	3.5885	2.3	0.2622	2.2	0.94	1501.3	29.2	1547.0	18.4	1610.0	14.3	1610.0	14.3	93.2
67	259235	1.4	10.0746	0.7	3.9595	3.4	0.2893	3.3	0.98	1638.1	47.9	1625.9	27.5	1610.2	13.4	1610.2	13.4	101.7
94	121538	1.6	10.0530	0.7	4.0177	2.5	0.2929	2.4	0.96	1656.2	35.6	1637.8	20.7	1614.2	13.8	1614.2	13.8	102.6
217	149739	1.7	10.0417	0.8	3.7434	3.2	0.2726	3.1	0.97	1554.1	42.5	1580.7	25.5	1616.3	15.2	1616.3	15.2	96.2
100	47708	1.3	10.0148	0.6	3.9360	2.2	0.2859	2.1	0.96	1620.9	29.8	1621.1	17.5	1621.3	10.8	1621.3	10.8	100.0
123	155721	1.5	10.0114	0.7	3.6775	2.9	0.2670	2.8	0.97	1525.7	38.0	1566.5	23.0	1621.9	12.8	1621.9	12.8	94.1
189	132955	1.3	10.0092	0.8	3.9637	2.6	0.2877	2.5	0.95	1630.2	35.6	1626.8	21.2	1622.4	15.7	1622.4	15.7	100.5
81	79209	1.4	10.0010	0.7	3.9740	2.9	0.2883	2.8	0.97	1632.8	40.7	1628.9	23.7	1623.9	13.7	1623.9	13.7	100.5
79	23533	0.7	9.9673	0.7	3.6319	3.2	0.2625	3.1	0.98	1502.9	41.8	1556.6	25.4	1630.2	12.7	1630.2	12.7	92.2
133	279320	2.1	9.9653	0.9	3.8570	2.5	0.2788	2.3	0.94	1585.1	32.7	1604.7	20.0	1630.5	16.3	1630.5	16.3	97.2
174	13609	1.0	9.9593	0.7	3.5550	2.7	0.2568	2.6	0.96	1473.4	34.6	1539.6	21.6	1631.7	13.9	1631.7	13.9	90.3
234	760148	1.2	9.9446	0.7	3.9088	2.3	0.2819	2.2	0.96	1601.0	31.7	1615.5	18.9	1634.4	12.4	1634.4	12.4	98.0
100	244766	1.5	9.9215	0.6	3.9648	3.6	0.2853	3.5	0.99	1618.0	50.7	1627.0	29.1	1638.7	11.4	1638.7	11.4	98.7
161	124096	1.3	9.9073	0.6	3.9623	2.4	0.2847	2.3	0.97	1615.0	33.3	1626.5	19.5	1641.4	11.0	1641.4	11.0	98.4
202	33491	0.9	9.8939	0.8	3.7805	2.7	0.2713	2.6	0.96	1547.3	35.9	1588.6	21.9	1643.9	14.7	1643.9	14.7	94.1
307	42292	0.7	9.8808	0.7	3.8953	2.4	0.2791	2.3	0.96	1587.0	32.4	1612.7	19.4	1646.3	12.2	1646.3	12.2	96.4
389	9133	1.3	9.8795	0.6	3.5513	2.2	0.2545	2.1	0.97	1461.4	28.0	1538.7	17.6	1646.6	10.8	1646.6	10.8	88.8
160	73943	1.5	9.8164	0.7	3.9641	2.6	0.2822	2.4	0.96	1602.6	34.7	1626.9	20.7	1658.5	13.7	1658.5	13.7	96.6
124	141707	1.5	9.7261	0.4	4.4097	2.4	0.3111	2.4	0.98	1745.9	36.2	1714.2	19.9	1675.6	8.1	1675.6	8.1	104.2
138	7997742	1.4	9.6986	0.8	4.2674	2.4	0.3002	2.2	0.95	1692.2	33.5	1687.1	19.5	1680.8	13.9	1680.8	13.9	100.7
371	33660	1.9	9.6490	0.7	3.8907	2.6	0.2723	2.5	0.96	1552.3	34.6	1611.7	21.1	1690.2	13.4	1690.2	13.4	91.8
160	10970	1.7	9.6261	1.4	4.0282	3.2	0.2812	2.9	0.90	1597.5	40.7	1639.9	25.8	1694.6	24.9	1694.6	24.9	94.3
259	180617	5.6	9.5026	0.6	4.3430	2.4	0.2993	2.3	0.97	1687.9	34.6	1701.6	19.8	1718.4	10.5	1718.4	10.5	98.2
59	32959	0.8	9.4857	2.4	4.5526	4.0	0.3132	3.2	0.81	1756.5	49.8	1740.6	33.4	1721.7	43.3	1721.7	43.3	102.0
218	5540458	2.9	9.4745	0.8	4.5922	2.3	0.3156	2.2	0.94	1768.0	33.7	1747.8	19.3	1723.8	14.0	1723.8	14.0	102.6
308	40275	1.4	9.4144	0.7	4.2997	2.0	0.2936	1.8	0.93	1659.4	27.0	1693.3	16.4	1735.5	13.4	1735.5	13.4	95.6
54	14266	2.6	9.3966	0.7	4.7734	4.4	0.3253	4.4	0.99	1815.6	69.1	1780.2	37.2	1739.0	13.7	1739.0	13.7	104.4
337	11141	2.6	9.3151	0.7	3.6837	2.5	0.2489	2.4	0.96	1432.6	30.9	1567.8	19.9	1754.9	12.0	1754.9	12.0	81.6
344	53585	2.2	9.2652	0.6	4.5735	2.0	0.3073	1.9	0.96	1727.6	29.2	1744.5	16.7	1764.8	10.2	1764.8	10.2	97.9
176	267709	2.6	9.1625	0.7	4.8357	2.2	0.3213	2.1	0.95	1796.3	32.4	1791.1	18.3	1785.1	12.2	1785.1	12.2	100.6
146	822243	2.1	8.8395	0.7	5.3306	2.7	0.3417	2.6	0.97	1895.0	43.3	1873.8	23.3	1850.3	12.4	1850.3	12.4	102.4
440	56265	2.3	8.2187	0.5	5.6146	2.4	0.3347	2.3	0.97	1861.0	37.4	1918.3	20.5	1980.9	9.8	1980.9	9.8	93.9
153	3856719	1.3	5.3605	0.6	13.7270	2.8	0.5337	2.7	0.98	2756.9	61.1	2731.1	26.4	2712.0	9.8	2712.0	9.8	101.7

Offshore Zircons

PS 1423 217-219 cm

63-250 µm

					Isotope ratios						Apparent ages (Ma)								
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
91	3861	1.7	21.5244	2.3	0.1142	2.8	0.0178	1.5	0.53	114.0	1.6	109.8	2.9	21.5	56.1	114.0	1.6	NA
318	37031	2.0	18.4684	2.4	0.1361	3.0	0.0182	1.8	0.59	116.5	2.0	129.6	3.6	377.1	54.0	116.5	2.0	NA
1817	207352	1.7	20.0977	0.9	0.1295	1.6	0.0189	1.4	0.82	120.6	1.6	123.6	1.9	183.6	21.6	120.6	1.6	NA
423	49934	1.8	19.4004	1.0	0.1372	1.5	0.0193	1.1	0.75	123.3	1.4	130.6	1.8	265.3	22.5	123.3	1.4	NA
372	12287	1.3	20.0384	1.5	0.1396	1.8	0.0203	1.0	0.55	129.6	1.2	132.7	2.2	190.6	34.3	129.6	1.2	NA
825	3686471	2.2	20.2199	1.1	0.1411	1.7	0.0207	1.3	0.78	132.1	1.7	134.0	2.1	169.5	24.6	132.1	1.7	NA
105	5415	1.5	19.1146	2.3	0.1575	3.2	0.0218	2.2	0.70	139.3	3.0	148.5	4.4	299.2	52.1	139.3	3.0	NA
399	20172	1.1	17.2637	2.3	0.1841	2.6	0.0231	1.1	0.44	147.0	1.7	171.6	4.1	526.9	50.4	147.0	1.7	NA
111	2606	1.5	20.3872	5.5	0.1614	5.6	0.0239	1.0	0.18	152.1	1.5	151.9	7.9	150.2	128.5	152.1	1.5	NA
63	505	1.2	4.5276	1.1	0.7366	1.4	0.0242	0.9	0.64	154.1	1.4	560.4	6.1	2987.0	17.5	154.1	1.4	NA
250	3685	1.4	14.4861	4.5	0.2477	4.6	0.0260	0.9	0.21	165.7	1.6	224.7	9.3	899.7	92.7	165.7	1.6	NA
230	11081	2.8	19.6504	1.5	0.1876	3.9	0.0267	3.6	0.93	170.2	6.0	174.6	6.2	235.9	33.6	170.2	6.0	NA
1340	23572	3.1	18.4277	1.2	0.2042	1.9	0.0273	1.4	0.77	173.6	2.5	188.7	3.2	382.1	27.1	173.6	2.5	NA
348	9024	2.6	20.7684	1.6	0.1818	1.9	0.0274	1.1	0.59	174.2	2.0	169.6	3.0	106.7	37.2	174.2	2.0	NA
427	13235	0.9	15.5238	3.9	0.2439	4.2	0.0275	1.7	0.40	174.7	2.9	221.6	8.4	755.3	81.7	174.7	2.9	NA
263	49982	3.8	17.5942	2.1	0.2168	2.9	0.0277	2.0	0.70	176.0	3.5	199.2	5.2	485.2	45.5	176.0	3.5	NA
280	7376	3.9	20.3257	1.5	0.1899	2.5	0.0280	2.0	0.79	178.0	3.6	176.5	4.1	157.3	36.2	178.0	3.6	NA
813	42896	2.9	20.1126	1.1	0.1924	1.8	0.0281	1.4	0.78	178.5	2.5	178.6	2.9	181.9	26.2	178.5	2.5	NA
359	32668	5.7	19.9480	1.0	0.1943	1.7	0.0281	1.4	0.80	178.8	2.4	180.3	2.8	201.0	23.7	178.8	2.4	NA
218	4651	1.7	15.1136	5.4	0.2592	5.6	0.0284	1.6	0.28	180.7	2.8	234.0	11.7	811.6	112.5	180.7	2.8	NA
102	12810	1.3	16.1943	2.9	0.2419	4.2	0.0284	3.0	0.72	180.7	5.4	220.0	8.3	665.5	62.6	180.7	5.4	NA
367	72617	4.7	19.8190	1.0	0.1979	1.6	0.0285	1.2	0.77	180.9	2.2	183.3	2.7	216.1	23.3	180.9	2.2	NA
210	33251	4.9	19.9133	1.3	0.1974	1.6	0.0285	1.0	0.63	181.3	1.8	182.9	2.7	205.1	29.2	181.3	1.8	NA
310	25586	3.5	19.5961	1.4	0.2018	2.5	0.0287	2.1	0.84	182.4	3.8	186.7	4.3	242.2	31.3	182.4	3.8	NA
256	17391	2.2	18.2352	1.5	0.2174	1.7	0.0288	0.6	0.39	182.8	1.2	199.7	3.0	405.6	34.1	182.8	1.2	NA
482	55124	2.5	19.6013	1.1	0.2025	1.6	0.0288	1.1	0.69	183.1	2.0	187.3	2.7	241.6	26.1	183.1	2.0	NA
1212	79524	10.9	19.9005	0.8	0.2001	1.3	0.0289	1.1	0.82	183.6	2.0	185.2	2.3	206.6	17.9	183.6	2.0	NA
400	28337	1.9	19.4511	1.2	0.2064	2.2	0.0291	1.8	0.83	185.1	3.3	190.5	3.8	259.3	28.7	185.1	3.3	NA
263	7213	1.6	20.3586	1.2	0.1986	1.9	0.0293	1.4	0.77	186.4	2.6	183.9	3.1	153.5	27.9	186.4	2.6	NA
145	62438	3.3	18.9761	1.2	0.2144	1.5	0.0295	1.0	0.64	187.6	1.8	197.2	2.7	315.8	26.4	187.6	1.8	NA
301	31815	5.4	19.9026	1.1	0.2052	1.4	0.0296	0.9	0.65	188.3	1.7	189.5	2.4	206.3	25.0	188.3	1.7	NA
157	17987	1.2	17.9272	1.5	0.2279	1.9	0.0296	1.1	0.59	188.3	2.1	208.4	3.6	443.7	34.0	188.3	2.1	NA
535	50909	5.1	19.5944	0.7	0.2085	1.4	0.0296	1.2	0.85	188.3	2.2	192.3	2.5	242.4	17.1	188.3	2.2	NA
399	68219	9.6	17.0692	1.7	0.2400	2.9	0.0297	2.4	0.82	188.8	4.5	218.4	5.8	551.7	36.8	188.8	4.5	NA
338	22688	1.2	19.7802	1.0	0.2093	1.8	0.0300	1.5	0.83	190.8	2.9	192.9	3.2	220.6	23.9	190.8	2.9	NA
260	7373	6.2	21.4757	2.0	0.1963	8.0	0.0306	7.7	0.97	194.2	14.8	182.0	13.3	26.9	47.8	194.2	14.8	NA
409	15378	2.8	19.3410	0.9	0.2284	1.6	0.0320	1.4	0.84	203.3	2.8	208.8	3.1	272.3	20.4	203.3	2.8	NA
239	6186	1.0	13.4948	2.2	0.3667	3.6	0.0359	2.8	0.78	227.4	6.3	317.2	9.7	1044.3	44.8	227.4	6.3	NA
486	20925	1.3	18.0665	1.2	0.2782	1.6	0.0365	1.0	0.64	230.9	2.3	249.2	3.5	426.4	27.5	230.9	2.3	NA
793	78882	7.7	17.5245	0.8	0.5578	3.7	0.0709	3.6	0.98	441.7	15.3	450.1	13.4	494.0	17.6	441.7	15.3	89.4
117	31651	1.2	16.8988	1.2	0.6971	1.7	0.0855	1.2	0.70	528.7	6.2	537.1	7.3	573.6	27.1	528.7	6.2	92.2
157	32728	2.4	16.6710	0.8	0.7273	1.0	0.0880	0.7	0.65	543.6	3.4	555.0	4.3	603.0	16.4	543.6	3.4	90.1
179	23873	1.8	16.5689	1.1	0.7386	1.4	0.0888	0.9	0.63	548.4	4.8	561.6	6.2	616.3	24.3	548.4	4.8	89.0
79	94670	7.4	15.3837	1.5	0.8044	1.8	0.0898	1.0	0.54	554.3	5.1	599.3	8.0	774.4	31.4	554.3	5.1	71.6
684	104367	2.7	16.6444	0.7	0.7487	1.1	0.0904	0.9	0.79	558.0	4.7	567.4	4.8	606.4	14.6	558.0	4.7	92.0
367	24864	1.9	16.8804	1.0	0.7394	1.3	0.0906	0.9	0.67	558.9	4.7	562.1	5.6	575.9	21.1	558.9	4.7	97.0
427	101588	4.5	17.1050	1.0	0.7323	1.6	0.0909	1.3	0.79	560.8	6.8	557.9	6.9	547.1	21.3	560.8	6.8	102.5
131	115408	2.7	16.0923	1.4	0.7854	2.1	0.0917	1.6	0.75	565.6	8.4	588.5	9.3	679.0	29.4	565.6	8.4	83.3
383	128894	3.2	16.5780	0.9	0.7702	1.4	0.0926	1.1	0.78	571.2	6.0	579.9	6.2	615.1	18.8	571.2	6.0	92.9
377	67544	6.5	16.1416	1.0	0.8126	2.8	0.0952	2.6	0.94	586.0	14.8	603.9	12.8	672.5	20.6	586.0	14.8	87.1
559	8149	1.1	13.2273	4.3	1.0405	5.0	0.0999	2.6	0.51	613.6	15.1	724.2	26.1	1084.6	86.9	613.6	15.1	56.6
813	118565	10.0	16.0498	1.6	0.8645	2.2	0.1007	1.5	0.68	618.3	8.8	632.6	10.3	684.6	34.3	618.3	8.8	90.3
275	66441	18.0	15.9737	1.5	0.9055	2.7	0.1049	2.3	0.83	643.3	13.9	654.7	13.1	694.8	32.3	643.3	13.9	92.6
305	73707	2.3	16.2786	0.6	0.8968	1.2	0.1059	1.1	0.86	649.0	6.6	650.0	6.0	654.3	13.7	649.0	6.6	99.2
96	20436	2.3	13.4026	1.0	1.1490	3.7	0.1117	3.6	0.96	682.8	23.3	776.8	20.3	1058.1	20.6	682.8	23.3	64.5
39	12697	1.6	16.8091	1.7	0.9217	2.6	0.1124	2.0	0.77	686.8	12.8	663.3	12.5	585.2	35.9	686.8	12.8	117.4
325	468989	3.8	14.4161	1.2	1.3278	3.3	0.1389	3.0	0.92	838.4	23.8	857.9	18.9	909.7	25.6	838.4	23.8	92.2
727	428566	1.8	13.7329	1.2	1.5077	2.5	0.1502	2.2	0.89	902.3	18.8	933.5	15.4	1008.9	23.3	1008.9	23.3	89.4
505	78580	4.5	13.6761	0.8	1.4876	1.9	0.1476	1.7	0.90	887.6	13.8	925.3	11.3	1017.3	16.5	1017.3	16.5	87.3
322	182401	3.8	12.5969	0.5	2.2042	1.1	0.2015	1.0	0.90	1183.2	11.1	1182.4	7.9	1181.8	9.7	1181.8	9.7	100.1
144	13662	2.0	12.3170	1.3	2.0656	3.2	0.1846	2.9	0.91	1092.1	29.6	1137.5	22.1	1226.0	26.3	1226.0	26.3	89.1
114	5315	3.3	11.4440	5.9	1.1095	6.5	0.0921	2.8	0.42	568.1	15.1	757.9	34.9	1368.9	113.7	1368.9	113.7	41.5
166	156165	1.3	11.3310	1.1	2.2689	3.2	0.1865	3.0	0.94	1102.6	30.9	1202.7	22.7	1388.0	20.3	1388.0	20.3	79.4
438	63661	2.6	10.7570	0.7	1.1836	2.2	0.0924	2.1	0.94	569.6	11.3	793.0	12.2	1487.1	14.1	1487.1	14.1	38.3
371	150246	1.9	10.2318	1.1	2.8945	2.4	0.2149	2.1	0.88	1254.8	23.7	1380.5	17.9	1581.3	21.3	1581.3	21.3	79.4
93	173345	1.3	9.9585	0.7	3.5468	1.5	0.2563	1.3	0.88	1470.8	17.2	1537.7	11.7	1631.8	12.8	1631.8	12.8	90.1
520	95506	3.2	9.6240	0.7	3.7127	1.4	0.2593	1.2	0.88	1486.1	16.5	1574.1	11.3	1695.0	12.3	1695.0	12.3	87.7
362	71867	4.8	9.5638	0.7	3.5137	3.2	0.2438	3.1	0.97	1406.6	39.2	1530.3	25.2	1706.6	13.6	1706.6	13.6	82.4
151	333948	0.9	8.7175	0.8	5.1845	1.6	0.3279	1.4	0.86	1828.4	22.3	1850.1	13.8	1875.3	14.9	1875.3	14.9	97.5

PS 1423-2 262-264 cm

63-125 µm

					Isotope ratios					Apparent ages (Ma)								
U (ppm)	206Pb 204Pb	U/Th	206Pb* 207Pb*	± (%)	207Pb* 235U*	± (%)	206Pb* 238U	± (%)	error corr.	206Pb* 238U*	± (Ma)	207Pb* 235U	± (Ma)	206Pb* 207Pb*	± (Ma)	Best age (Ma)	± (Ma)	Conc (%)
392	113539	2.5	20.6557	1.2	0.1144	1.7	0.0171	1.3	0.74	109.6	1.4	110.0	1.8	119.5	27.7	109.6	1.4	NA
298	30187	3.9	18.2600	1.8	0.1295	2.5	0.0172	1.6	0.66	109.6	1.8	123.6	2.9	402.6	41.3	109.6	1.8	NA
258	10748	2.2	20.6921	1.3	0.1172	1.8	0.0176	1.3	0.70	112.4	1.4	112.5	1.9	115.4	30.2	112.4	1.4	NA
1337	7663	3.2	14.5739	4.2	0.1816	4.4	0.0192	1.4	0.31	122.6	1.6	169.4	6.9	887.2	86.7	122.6	1.6	NA
265	11590	1.9	20.0291	1.9	0.1349	2.5	0.0196	1.7	0.66	125.2	2.1	128.5	3.1	191.6	44.3	125.2	2.1	NA
185	27070	2.1	15.1299	2.9	0.1789	3.2	0.0196	1.2	0.37	125.4	1.5	167.1	4.9	809.3	61.7	125.4	1.5	NA
162	2994	1.2	16.1240	2.9	0.1723	3.2	0.0202	1.3	0.40	128.6	1.6	161.4	4.7	674.8	62.4	128.6	1.6	NA
134	224338	0.9	15.0728	3.0	0.1848	3.2	0.0202	1.1	0.34	129.0	1.4	172.2	5.1	817.3	63.2	129.0	1.4	NA
219	102583	1.6	20.4238	1.2	0.1385	1.6	0.0205	1.1	0.70	131.0	1.5	131.7	2.0	146.1	27.6	131.0	1.5	NA
516	11247	1.5	19.5176	1.3	0.1479	1.6	0.0209	1.0	0.59	133.6	1.3	140.1	2.1	251.5	30.5	133.6	1.3	NA
234	5250	1.1	19.6697	2.4	0.1471	2.6	0.0210	1.0	0.38	133.9	1.3	139.3	3.4	233.6	55.3	133.9	1.3	NA
266	32947	1.5	17.9303	1.4	0.1619	1.9	0.0211	1.2	0.64	134.4	1.6	152.4	2.7	443.3	32.0	134.4	1.6	NA
140	2498	2.1	19.6857	2.0	0.1519	2.3	0.0217	1.0	0.45	138.4	1.4	143.6	3.0	231.7	46.8	138.4	1.4	NA
159	10800	1.0	16.4233	1.8	0.1825	2.1	0.0217	1.0	0.47	138.7	1.3	170.2	3.2	635.3	39.1	138.7	1.3	NA
43	932	1.4	15.3896	6.8	0.2062	7.1	0.0230	1.9	0.26	146.7	2.7	190.3	12.3	773.6	144.2	146.7	2.7	NA
132	11596	1.9	20.1443	1.9	0.1578	2.8	0.0231	2.0	0.73	147.0	3.0	148.8	3.9	178.2	44.6	147.0	3.0	NA
148	9657	1.6	19.2940	1.3	0.1668	1.7	0.0233	1.0	0.60	148.8	1.5	156.6	2.4	277.9	30.9	148.8	1.5	NA
115	1437	0.6	9.2162	7.1	0.3499	7.2	0.0234	1.4	0.20	149.1	2.1	304.6	19.0	1774.4	129.5	149.1	2.1	NA
273	6352	2.5	15.3000	6.3	0.2132	6.7	0.0237	2.3	0.35	150.8	3.5	196.2	12.0	785.9	132.0	150.8	3.5	NA
1361	788	1.6	5.7112	5.8	0.5907	5.9	0.0245	1.3	0.22	155.9	2.0	471.3	22.4	2606.9	96.6	155.9	2.0	NA
256	4520	1.5	14.9874	2.3	0.2286	2.7	0.0249	1.4	0.53	158.3	2.2	209.1	5.0	829.1	47.1	158.3	2.2	NA
196	403	1.1	3.1454	1.9	1.1629	3.6	0.0265	3.0	0.85	168.9	5.1	783.3	19.4	3559.8	28.6	168.9	5.1	NA
308	19701	1.8	19.3663	1.1	0.1954	1.9	0.0275	1.5	0.79	174.6	2.6	181.2	3.1	269.3	26.0	174.6	2.6	NA
214	90163	6.2	8.7993	2.5	0.4427	3.0	0.0283	1.7	0.56	179.7	3.0	372.2	9.3	1858.5	44.3	179.7	3.0	NA
84	5675	2.4	20.0516	1.9	0.1952	2.3	0.0284	1.3	0.57	180.5	2.4	181.1	3.9	189.0	44.6	180.5	2.4	NA
1805	81818	1.8	20.1009	0.6	0.1959	1.0	0.0286	0.8	0.83	181.6	1.5	181.7	1.7	183.3	13.2	181.6	1.5	NA
764	66242	1.3	19.3600	1.0	0.2039	1.2	0.0286	0.7	0.62	182.0	1.3	188.4	2.1	270.1	21.8	182.0	1.3	NA
553	43592	1.4	19.3277	1.1	0.2045	1.7	0.0287	1.3	0.77	182.2	2.3	188.9	2.9	273.9	24.7	182.2	2.3	NA
156	10432	2.0	11.5542	2.4	0.3422	2.7	0.0287	1.3	0.49	182.3	2.4	298.9	7.1	1350.4	46.2	182.3	2.4	NA
155	7146	3.5	20.7337	1.6	0.1915	2.0	0.0288	1.2	0.59	183.1	2.2	177.9	3.3	110.6	38.3	183.1	2.2	NA
228	13379	3.1	19.5363	1.3	0.2032	1.6	0.0288	0.9	0.57	183.1	1.6	187.9	2.7	249.3	29.8	183.1	1.6	NA
124	19890	2.0	17.1601	2.5	0.2316	2.7	0.0288	1.1	0.42	183.2	2.1	211.5	5.2	540.1	53.6	183.2	2.1	NA
209	15471	2.7	20.2063	1.4	0.1972	1.9	0.0289	1.3	0.68	183.7	2.3	182.7	3.1	171.1	31.8	183.7	2.3	NA
168	78352	1.6	18.6447	2.0	0.2140	2.4	0.0289	1.4	0.57	183.9	2.5	196.9	4.4	355.8	45.2	183.9	2.5	NA
178	522169	3.3	20.0242	1.3	0.1996	1.6	0.0290	1.1	0.64	184.3	1.9	184.8	2.8	192.2	29.4	184.3	1.9	NA
145	93173	1.8	18.1958	1.2	0.2202	1.7	0.0291	1.2	0.70	184.7	2.2	202.1	3.2	410.5	27.9	184.7	2.2	NA
285	39495	7.5	19.7599	1.0	0.2028	1.5	0.0291	1.1	0.71	184.8	1.9	187.5	2.5	223.0	24.0	184.8	1.9	NA
468	34504	14.7	20.4505	1.2	0.1969	2.1	0.0292	1.7	0.83	185.7	3.2	182.5	3.5	143.0	27.4	185.7	3.2	NA
180	20638	1.6	18.8847	1.1	0.2139	2.1	0.0293	1.8	0.85	186.3	3.3	196.9	3.8	326.8	25.7	186.3	3.3	NA
180	18920	3.2	19.9052	1.6	0.2049	2.3	0.0296	1.6	0.71	188.0	3.0	189.2	4.0	206.0	37.3	188.0	3.0	NA
267	9411	5.9	20.6629	1.9	0.1986	2.2	0.0298	1.2	0.52	189.2	2.2	184.0	3.8	118.7	45.1	189.2	2.2	NA
320	95774	3.5	15.9778	1.8	0.2570	2.7	0.0298	1.9	0.73	189.3	3.6	232.2	5.5	694.2	39.2	189.3	3.6	NA
263	25979	1.7	20.0544	1.0	0.2062	2.0	0.0300	1.8	0.87	190.6	3.3	190.4	3.5	188.7	23.4	190.6	3.3	NA
309	77173	4.3	19.6793	1.4	0.2104	2.2	0.0300	1.7	0.77	190.8	3.2	193.9	3.9	232.4	32.7	190.8	3.2	NA
170	7247	3.6	8.6430	10.8	0.4941	10.9	0.0310	1.8	0.17	196.7	3.6	407.7	36.7	1890.8	194.2	196.7	3.6	NA
91	35329	1.5	20.0746	2.7	0.2158	2.8	0.0314	1.0	0.34	199.5	1.9	198.4	5.1	186.3	62.3	199.5	1.9	NA
381	40495	1.6	19.1294	1.5	0.2675	2.1	0.0371	1.4	0.70	235.0	3.3	240.7	4.4	297.5	33.3	235.0	3.3	NA
330	76558	3.2	16.6520	1.1	0.4340	1.7	0.0524	1.2	0.74	329.4	3.9	366.0	5.1	605.5	24.1	329.4	3.9	NA
76	8002	1.5	13.8578	2.4	0.5999	5.2	0.0603	4.6	0.89	377.6	17.0	477.2	19.8	990.5	48.1	377.6	17.0	NA
214	32172	1.7	15.3736	1.9	0.5985	2.5	0.0668	1.7	0.67	416.6	6.7	476.3	9.5	775.8	39.2	416.6	6.7	53.7
233	109382	1.6	17.3707	0.8	0.6256	1.4	0.0789	1.2	0.84	489.3	5.5	493.4	5.5	513.4	16.6	489.3	5.5	95.3
105	8544	6.2	17.4640	1.2	0.6226	2.0	0.0789	1.5	0.78	489.5	7.2	491.5	7.6	501.6	26.9	489.5	7.2	97.6
195	28347	4.1	17.0663	0.9	0.6387	1.8	0.0791	1.6	0.88	490.7	7.6	501.5	7.2	552.1	19.3	490.7	7.6	88.9
602	28521	2.9	16.3286	1.5	0.6830	1.6	0.0809	0.6	0.38	501.6	2.9	528.6	6.5	647.8	31.4	501.6	2.9	77.4
403	12337	2.4	15.4743	1.1	0.7240	1.5	0.0813	1.1	0.71	503.8	5.3	553.0	6.6	762.1	22.8	503.8	5.3	66.1
211	70383	2.3	15.7107	1.5	0.7264	1.8	0.0828	1.0	0.56	512.8	5.1	554.4	7.9	730.1	32.4	512.8	5.1	70.2
84	5988	4.8	16.6606	1.6	0.6862	1.8	0.0830	0.9	0.48	513.7	4.3	530.5	7.4	604.3	34.0	513.7	4.3	85.0
1632	201765	44.3	17.2098	0.5	0.6755	0.9	0.0843	0.7	0.85	522.0	3.7	524.0	3.5	533.8	9.9	522.0	3.7	97.8
44	40071	1.6	17.3572	1.3	0.6701	1.7	0.0844	1.1	0.66	522.3	5.7	520.8	7.0	515.1	28.1	522.3	5.7	101.4
312	69392	3.5	16.8927	0.6	0.6926	1.0	0.0849	0.8	0.78	525.3	3.8	534.4	4.0	574.3	13.1	525.3	3.8	91.5
124	7180	1.5	14.3262	1.2	0.8173	1.4	0.0850	0.8	0.57	525.6	4.1	606.5	6.6	922.6	24.2	525.6	4.1	57.0
52	41402	1.4	15.6423	2.0	0.7585	2.9	0.0861	2.1	0.72	532.4	10.6	573.2	12.6	739.3	42.0	532.4	10.6	72.0
159	27078	2.8	16.9769	0.8	0.7007	1.3	0.0863	1.0	0.80	533.7	5.2	539.2	5.3	563.5	16.6	533.7	5.2	94.7
636	75745	13.4	16.6575	1.1	0.7194	1.9	0.0870	1.5	0.80	537.5	7.7	550.3	7.9	604.7	24.1	537.5	7.7	88.9
122	23341	3.2	17.1816	1.4	0.7016	2.1	0.0875	1.6	0.76	540.6	8.3	539.8	8.8	537.4	29.9	540.6	8.3	100.6

462	1575291	15.8	17.0075	1.0	0.7117	1.9	0.0878	1.6	0.85	542.7	8.5	545.7	8.1	559.6	21.8	542.7	8.5	97.0
262	45836	2.2	16.8524	1.1	0.7216	1.7	0.0882	1.3	0.77	545.1	6.6	551.6	7.1	579.6	23.2	545.1	6.6	94.0
812	60371	12.1	16.7016	0.8	0.7330	1.3	0.0888	1.0	0.79	548.6	5.2	558.3	5.4	599.0	16.9	548.6	5.2	91.6
436	146376	11.8	16.5951	0.8	0.7411	1.5	0.0892	1.2	0.84	551.0	6.5	563.1	6.3	612.9	17.0	551.0	6.5	89.9
343	23636	17.5	16.8249	0.9	0.7351	1.6	0.0897	1.3	0.82	554.0	6.8	559.6	6.7	583.1	19.2	554.0	6.8	95.0
365	66681	14.5	16.8954	0.8	0.7361	1.3	0.0902	1.0	0.81	556.9	5.6	560.1	5.6	574.0	16.5	556.9	5.6	97.0
541	21430	5.3	14.0948	3.0	0.8875	6.1	0.0908	5.3	0.87	560.1	28.4	645.0	29.0	955.9	60.4	560.1	28.4	58.6
977	15136	5.0	15.2685	1.6	0.8194	3.2	0.0908	2.8	0.86	560.2	14.9	607.7	14.8	790.2	34.6	560.2	14.9	70.9
515	48206	7.9	16.9298	0.7	0.7432	1.2	0.0913	1.0	0.83	563.2	5.1	564.3	5.0	569.6	14.2	563.2	5.1	98.9
785	125265	4.7	16.9444	0.8	0.7494	1.5	0.0921	1.2	0.81	568.1	6.4	567.9	6.3	567.7	18.4	568.1	6.4	100.1
150	73193	2.9	16.1332	1.5	0.7880	2.6	0.0922	2.1	0.82	568.8	11.4	590.0	11.4	673.5	31.4	568.8	11.4	84.4
243	128839	2.2	15.2657	0.6	0.8501	1.1	0.0942	1.0	0.86	580.1	5.3	624.7	5.2	790.6	11.7	580.1	5.3	73.4
982	716494	29.0	16.4804	0.8	0.7898	1.2	0.0944	0.9	0.76	581.8	5.2	591.1	5.5	627.8	17.3	581.8	5.2	92.7
535	254028	10.3	16.8902	0.8	0.7743	2.9	0.0949	2.8	0.96	584.4	15.7	582.2	12.9	574.7	16.9	584.4	15.7	101.7
363	53582	3.4	16.4846	0.9	0.7957	1.2	0.0952	0.7	0.61	586.1	4.1	594.4	5.4	627.3	20.5	586.1	4.1	93.4
166	100323	2.4	16.5535	0.8	0.7936	1.1	0.0953	0.8	0.69	586.9	4.4	593.2	5.1	618.3	17.8	586.9	4.4	94.9
878	1854579	24.1	16.2848	1.2	0.8181	3.0	0.0967	2.8	0.92	594.8	15.9	607.0	13.9	653.5	25.6	594.8	15.9	91.0
474	126004	3.7	14.7917	0.9	0.9115	1.6	0.0978	1.3	0.81	601.7	7.3	657.9	7.6	856.5	18.8	601.7	7.3	70.3
119	44674	2.7	16.1739	1.0	0.8592	2.1	0.1008	1.9	0.88	619.3	11.0	629.7	10.0	668.1	22.0	619.3	11.0	92.7
124	25727	3.0	13.7258	3.3	1.0167	6.3	0.1013	5.4	0.85	621.8	31.9	712.3	32.4	1009.9	67.9	621.8	31.9	61.6
155	150969	1.0	14.4661	0.9	0.9684	1.2	0.1016	0.9	0.72	624.0	5.3	687.6	6.2	902.5	17.6	624.0	5.3	69.1
78	18158	1.6	15.7510	1.4	0.8980	1.6	0.1026	0.8	0.51	629.8	4.8	650.7	7.6	724.6	28.7	629.8	4.8	86.9
409	292535	1.7	15.3387	0.6	0.9356	1.0	0.1041	0.9	0.84	638.5	5.3	670.6	5.1	780.6	11.7	638.5	5.3	81.8
284	145974	4.5	15.8995	0.8	0.9029	1.6	0.1042	1.4	0.87	638.7	8.7	653.3	7.9	704.7	17.0	638.7	8.7	90.6
286	130634	8.2	15.4915	1.2	0.9267	2.3	0.1042	1.9	0.84	638.8	11.5	665.9	11.0	759.7	26.0	638.8	11.5	84.1
581	61708	14.0	16.0217	0.9	0.8992	2.2	0.1045	2.0	0.91	640.9	12.2	651.3	10.6	688.3	19.7	640.9	12.2	93.1
226	55502	34.8	13.3330	2.7	1.0840	3.4	0.1049	2.0	0.59	642.9	12.2	745.6	17.9	1068.6	54.8	642.9	12.2	60.2
312	534195	3.4	16.0396	1.6	0.9016	2.6	0.1049	2.1	0.80	643.2	12.7	652.6	12.5	686.0	33.5	643.2	12.7	93.8
309	287541	7.0	15.7616	0.8	0.9207	1.6	0.1053	1.5	0.89	645.4	9.0	662.7	8.0	723.2	16.1	645.4	9.0	89.2
326	266858	7.4	14.9788	0.9	0.9936	2.0	0.1080	1.8	0.89	661.1	11.1	700.6	10.0	830.3	18.8	661.1	11.1	79.6
301	163056	2.1	14.8327	1.8	1.0263	2.6	0.1105	2.0	0.75	675.4	12.7	717.1	13.6	850.7	36.5	675.4	12.7	79.4
186	40376	2.2	15.5075	1.5	0.9853	2.8	0.1109	2.4	0.85	677.8	15.6	696.3	14.3	757.6	31.0	677.8	15.6	89.5
549	130478	6.3	16.1905	1.0	0.9454	2.0	0.1111	1.7	0.86	678.9	11.0	675.7	9.7	666.0	21.3	678.9	11.0	101.9
638	33931	3.9	15.4095	1.1	0.9991	1.4	0.1117	0.9	0.66	682.6	6.1	703.3	7.2	770.9	22.2	682.6	6.1	88.5
353	67116	6.7	14.3397	1.6	1.0837	2.6	0.1128	2.1	0.78	688.7	13.5	745.5	13.9	920.6	33.4	688.7	13.5	74.8
334	95603	9.2	14.2061	2.9	1.1243	3.1	0.1159	1.2	0.38	706.9	7.9	765.1	16.7	939.8	58.8	706.9	7.9	75.2
212	100038	7.5	15.9655	0.6	1.0086	0.8	0.1168	0.5	0.65	712.3	3.4	708.2	3.9	695.9	12.4	712.3	3.4	102.4
987	271717	8.3	15.4420	0.8	1.1043	1.7	0.1237	1.5	0.87	752.0	10.4	755.4	8.9	766.5	17.3	752.0	10.4	98.1
437	588778	3.6	14.5828	1.3	1.3261	2.5	0.1403	2.1	0.86	846.5	16.9	857.2	14.3	885.9	25.9	846.5	16.9	95.5
33	10655	2.9	13.7390	1.8	1.6685	3.9	0.1663	3.5	0.89	991.9	31.8	996.6	24.8	1008.0	36.5	1008.0	36.5	98.4
705	62213	75.3	13.7068	0.9	1.3395	1.8	0.1332	1.6	0.86	806.2	12.1	863.0	10.7	1012.7	18.8	1012.7	18.8	79.6
178	42298	2.8	13.6749	0.9	1.6890	1.5	0.1676	1.1	0.77	998.8	10.6	1004.4	9.5	1017.4	19.2	1017.4	19.2	98.2
411	666798	15.8	13.6178	1.4	1.5948	3.0	0.1576	2.7	0.88	943.3	23.5	968.2	19.0	1025.9	29.1	1025.9	29.1	91.9
309	481732	2.5	13.5364	1.0	1.5579	1.8	0.1530	1.6	0.84	917.8	13.3	953.6	11.4	1038.0	19.9	1038.0	19.9	88.4
687	115851	3.0	13.4576	1.0	1.7213	1.9	0.1681	1.6	0.86	1001.5	15.2	1016.5	12.3	1049.9	19.9	1049.9	19.9	95.4
75	10908	3.1	13.4049	1.2	1.4895	2.1	0.1449	1.8	0.84	872.2	14.8	926.1	13.0	1057.7	23.2	1057.7	23.2	82.5
224	142334	2.1	13.3971	0.6	1.8634	1.4	0.1811	1.2	0.89	1073.2	11.9	1068.2	8.9	1058.9	12.4	1058.9	12.4	101.3
114	168313	2.6	13.2951	0.6	1.8683	0.9	0.1802	0.7	0.78	1068.2	7.2	1069.9	6.2	1074.3	11.8	1074.3	11.8	99.4
154	466148	1.6	13.2719	0.6	1.7768	1.0	0.1711	0.8	0.81	1018.2	7.3	1037.0	6.2	1077.8	11.2	1077.8	11.2	94.5
284	196355	2.4	12.9993	0.7	2.0373	1.1	0.1922	0.8	0.78	1133.1	8.6	1128.1	7.2	1119.3	13.2	1119.3	13.2	101.2
372	131256	4.9	12.8273	0.8	2.1137	1.2	0.1967	0.9	0.76	1157.7	9.4	1153.3	8.0	1145.8	15.1	1145.8	15.1	101.0
464	341763	15.7	12.7771	0.5	2.0655	1.2	0.1915	1.1	0.92	1129.4	11.0	1137.4	7.9	1153.6	9.1	1153.6	9.1	97.9
65	26137	1.3	12.6290	1.4	1.8366	2.1	0.1683	1.6	0.75	1002.7	14.6	1058.6	13.8	1176.7	27.3	1176.7	27.3	85.2
400	132509	2.9	11.6793	1.3	1.0855	1.7	0.0920	1.2	0.68	567.3	6.4	746.3	9.1	1329.6	24.5	1329.6	24.5	42.7
200	84875	1.9	11.1664	0.8	2.5084	3.0	0.2032	2.9	0.96	1192.7	31.2	1274.5	21.7	1416.0	15.9	1416.0	15.9	84.2
183	34794	0.8	10.6103	1.3	1.1199	1.8	0.0862	1.2	0.66	533.1	6.0	762.9	9.6	1513.1	25.4	1513.1	25.4	35.2
161	81437	1.5	10.0770	1.6	1.1928	1.7	0.0872	0.8	0.45	539.0	4.1	797.2	9.6	1609.8	28.9	1609.8	28.9	33.5
675	460055	33.1	10.0293	0.7	3.9184	1.5	0.2851	1.3	0.87	1617.2	18.7	1617.5	12.2	1618.6	14.0	1618.6	14.0	99.9
816	18776	11.5	9.9839	2.6	3.1778	3.2	0.2302	1.9	0.59	1335.6	23.1	1451.8	25.0	1627.1	48.4	1627.1	48.4	82.1
1028	177508	98.6	9.9536	0.8	3.9478	1.8	0.2851	1.7	0.91	1617.1	24.0	1623.5	15.0	1632.7	14.5	1632.7	14.5	99.0
210	94431	19.1	9.9104	0.8	3.3543	1.6	0.2412	1.4	0.85	1392.9	17.0	1493.8	12.5	1640.8	15.6	1640.8	15.6	84.9
251	86672	0.8	9.8676	0.5	3.8555	0.9	0.2760	0.8	0.85	1571.4	10.9	1604.4	7.4	1648.8	9.0	1648.8	9.0	95.3
192	43137	2.1	9.2552	0.8	3.7409	1.3	0.2512	1.0	0.78	1444.7	12.8	1580.2	10.2	1766.7	14.4	1766.7	14.4	81.8
179	293466	3.7	9.2484	2.7	1.1637	3.1	0.0781	1.5	0.49	484.7	7.1	783.7	16.9	1768.1	49.4	1768.1	49.4	27.4
151	101575	3.5	7.1611	2.8	3.3408	3.5	0.1736	2.1	0.60	1031.8	19.9	1490.6	27.0	2222.8	47.7	2222.8	47.7	46.4
171	68533	1.9	6.5911	0.6	7.5358	1.8	0.3604	1.7	0.94	1984.0	29.0	2177.2	16.2	2365.4	10.5	2365.4	10.5	83.9
68	77128	20.8	5.2097	0.5	13.6111	0.9	0.5145	0.8	0.85	2675.8	16.5	2723.0	8.4	2758.9	7.7	2758.9	7.7	97.0
98	118270	2.0	5.1088	0.8	13.7947	1.7	0.5113	1.5	0.87	2662.4	32.2	2735.7	16.0	2791.0	13.6	2791.0	13.6	95.4
57	19895	2.5	4.6414	0.8	13.8920	1.3	0.4678	1.1	0.81	2474.1	22.4	2742.4	12.7	2947.0	12.7	2947.0	12.7	84.0
179	170079	1.8	4.0630	0.7	16.8046	1.9	0.4954	1.7	0.92	2594.0	36.4	2923.8	17.8	3160.0	11.6	3160.0	11.6	82.1

PS 1197-2 320-322 cm

63-125 µm

					Isotope ratios					Apparent ages (Ma)								
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
318	36387	2.2	20.5036	1.3	0.1236	2.0	0.0184	1.5	0.76	117.5	1.8	118.3	2.2	136.9	30.2	117.5	1.8	NA
275	11625	2.9	19.2795	1.7	0.1370	2.1	0.0192	1.3	0.61	122.3	1.6	130.3	2.6	279.6	38.2	122.3	1.6	NA
169	26643	1.8	20.1406	1.3	0.1680	1.6	0.0246	1.0	0.60	156.4	1.5	157.7	2.4	178.7	30.3	156.4	1.5	NA
118	11756	1.2	19.9758	1.4	0.2108	1.9	0.0305	1.3	0.69	194.0	2.5	194.2	3.3	197.8	31.7	194.0	2.5	NA
203	15358	0.9	20.3206	1.1	0.2301	1.8	0.0339	1.4	0.78	215.1	2.9	210.3	3.4	157.9	25.9	215.1	2.9	NA
208	1701	1.0	9.6315	13.3	0.5143	13.4	0.0359	2.3	0.17	227.6	5.1	421.3	46.4	1693.6	245.4	227.6	5.1	NA
566	51991	1.2	18.1876	1.0	0.2760	1.5	0.0364	1.2	0.75	230.6	2.6	247.5	3.4	411.5	23.0	230.6	2.6	NA
148	19116	0.9	14.5788	2.3	0.3950	2.6	0.0418	1.3	0.48	263.9	3.2	338.0	7.6	886.5	47.8	263.9	3.2	NA
296	30319	1.2	16.7082	1.8	0.4632	2.0	0.0562	0.9	0.45	352.2	3.2	386.5	6.6	598.2	39.4	352.2	3.2	NA
117	11519	3.3	17.6495	0.9	0.6071	1.1	0.0777	0.7	0.64	482.6	3.4	481.7	4.4	478.3	19.5	482.6	3.4	100.9
213	102665	2.1	16.9704	0.8	0.6337	1.5	0.0780	1.2	0.83	484.4	5.6	498.4	5.7	564.3	17.7	484.4	5.6	85.8
199	60083	2.2	17.5462	0.6	0.6225	1.0	0.0793	0.9	0.84	491.7	4.1	491.4	4.0	491.2	12.5	491.7	4.1	100.1
125	29337	2.3	16.6521	1.0	0.6576	1.5	0.0795	1.1	0.72	492.9	5.0	513.1	5.9	605.4	21.8	492.9	5.0	81.4
89	12753	1.2	17.5103	0.9	0.6273	1.3	0.0797	0.9	0.71	494.3	4.2	494.4	4.9	495.8	19.3	494.3	4.2	99.7
153	243042	2.6	16.7537	0.7	0.6621	1.3	0.0805	1.1	0.85	499.1	5.5	515.9	5.5	592.3	15.3	499.1	5.5	84.3
93	31798	1.4	17.2682	1.1	0.6447	1.6	0.0808	1.1	0.71	500.8	5.5	505.2	6.4	526.4	24.8	500.8	5.5	95.1
163	70114	3.5	17.5151	0.7	0.6360	1.2	0.0808	0.9	0.79	501.0	4.5	499.8	4.7	495.2	16.0	501.0	4.5	101.2
164	30518	0.8	16.9164	1.1	0.6698	1.4	0.0822	0.9	0.64	509.3	4.5	520.6	5.9	571.3	24.0	509.3	4.5	89.2
43	15521	0.8	16.8411	1.5	0.6730	2.0	0.0822	1.3	0.65	509.5	6.2	522.5	8.0	581.0	32.1	509.5	6.2	87.7
554	129037	5.7	17.4487	0.7	0.6516	1.3	0.0825	1.0	0.81	511.0	5.0	509.5	5.1	503.5	16.2	511.0	5.0	101.5
51	61092	1.6	16.8366	1.3	0.6784	1.7	0.0829	1.1	0.63	513.3	5.2	525.8	6.8	581.6	28.1	513.3	5.2	88.3
173	53204	1.7	16.8584	1.0	0.6808	1.5	0.0833	1.1	0.73	515.7	5.2	527.3	6.0	578.8	21.7	515.7	5.2	89.1
134	34500	11.9	17.2396	0.8	0.6729	1.2	0.0842	0.9	0.74	521.0	4.4	522.5	4.8	530.0	17.3	521.0	4.4	98.3
1084	333181	19.9	17.0064	0.8	0.6848	1.4	0.0845	1.1	0.81	523.0	5.6	529.7	5.7	559.8	17.5	523.0	5.6	93.4
85	15534	1.7	17.2679	1.4	0.6763	1.9	0.0847	1.3	0.68	524.3	6.6	524.5	7.9	526.4	31.2	524.3	6.6	99.6
183	1161268	1.5	17.3039	0.8	0.6750	1.1	0.0847	0.8	0.68	524.4	3.9	523.7	4.7	521.8	18.4	524.4	3.9	100.5
397	133619	4.8	17.0995	0.8	0.6848	1.5	0.0850	1.3	0.86	525.7	6.6	529.7	6.3	547.8	16.9	525.7	6.6	96.0
721	52562	18.8	16.4816	0.8	0.7107	1.5	0.0850	1.3	0.83	525.8	6.4	545.2	6.5	627.7	18.3	525.8	6.4	83.8
126	22177	2.1	17.2422	1.4	0.6797	1.8	0.0850	1.2	0.63	526.1	5.8	526.6	7.5	529.7	31.1	526.1	5.8	99.3
333	56603	0.8	16.5718	1.0	0.7098	1.4	0.0853	1.0	0.72	527.9	5.3	544.6	6.1	615.9	21.6	527.9	5.3	85.7
96	86693	1.3	16.2515	1.2	0.7255	1.6	0.0856	1.2	0.70	529.2	5.9	553.9	7.0	657.9	25.0	529.2	5.9	80.4
101	64101	0.8	17.2068	0.8	0.6903	1.1	0.0862	0.8	0.71	533.0	4.2	533.0	4.7	534.2	17.6	533.0	4.2	99.8
215	41461	8.2	16.8917	0.9	0.7032	1.3	0.0862	0.8	0.66	533.0	4.3	540.7	5.3	574.5	20.5	533.0	4.3	92.8
399	32165	3.2	17.3095	0.8	0.6875	1.7	0.0863	1.5	0.89	533.9	7.8	531.3	7.0	521.1	17.0	533.9	7.8	102.5
43	30290	3.5	16.7925	1.1	0.7090	1.5	0.0864	1.1	0.71	534.1	5.6	544.1	6.5	587.3	23.5	534.1	5.6	90.9
316	58509	1.7	17.0904	0.7	0.6992	1.3	0.0867	1.1	0.85	536.0	5.8	538.3	5.6	549.0	15.2	536.0	5.8	97.6
36	8475	1.9	17.3092	1.5	0.6933	1.8	0.0871	0.9	0.54	538.2	4.9	534.8	7.3	521.1	32.4	538.2	4.9	103.3
25	12601	0.6	16.1922	1.2	0.7430	1.6	0.0873	1.0	0.62	539.5	5.0	564.1	6.7	665.7	26.2	539.5	5.0	81.0
41	15373	1.1	16.8941	1.3	0.7125	1.7	0.0873	1.1	0.67	539.8	5.9	546.2	7.2	574.2	27.4	539.8	5.9	94.0
246	89971	1.6	16.9760	0.8	0.7096	1.6	0.0874	1.3	0.85	540.2	6.9	544.5	6.6	563.6	18.3	540.2	6.9	95.8
753	60789	34.4	17.2841	0.7	0.6977	0.9	0.0875	0.7	0.72	540.8	3.5	537.4	4.0	524.3	14.4	540.8	3.5	103.1
228	47349	13.1	16.8226	0.6	0.7188	1.1	0.0877	0.9	0.84	542.2	4.6	550.0	4.5	583.4	12.6	542.2	4.6	92.9
47	7582	2.7	16.8940	1.4	0.7159	1.9	0.0878	1.3	0.66	542.2	6.5	548.2	8.0	574.2	30.8	542.2	6.5	94.4
71	15691	1.6	17.1407	1.2	0.7062	1.4	0.0878	0.7	0.52	542.7	3.9	542.5	6.0	542.6	26.5	542.7	3.9	100.0
272	254232	5.6	17.1301	0.8	0.7082	1.2	0.0880	1.0	0.77	543.8	5.0	543.7	5.2	543.9	17.4	543.8	5.0	100.0
163	292163	5.1	16.6191	1.1	0.7305	1.5	0.0881	1.1	0.70	544.2	5.6	556.8	6.6	609.7	23.9	544.2	5.6	89.3
117	202507	2.8	16.8861	0.8	0.7206	1.2	0.0883	0.9	0.75	545.4	4.7	551.0	5.1	575.2	17.3	545.4	4.7	94.8
519	180075	2.2	17.1432	0.8	0.7106	1.4	0.0884	1.1	0.81	546.0	5.9	545.1	5.8	542.3	17.7	546.0	5.9	100.7
423	76966	36.6	16.9996	0.8	0.7202	1.5	0.0888	1.3	0.83	548.6	6.6	550.8	6.4	560.6	18.3	548.6	6.6	97.9
342	81873	2.6	17.1548	0.8	0.7146	1.4	0.0889	1.2	0.84	549.3	6.4	547.5	6.1	540.8	17.2	549.3	6.4	101.6
437	2472034	3.2	17.0274	0.6	0.7224	1.3	0.0893	1.1	0.87	551.1	5.9	552.1	5.5	557.1	14.0	551.1	5.9	98.9
670	570735	13.7	17.0820	0.6	0.7203	1.1	0.0893	0.9	0.84	551.3	4.6	550.9	4.5	550.1	12.6	551.3	4.6	100.2
432	43800	3.1	16.8376	0.9	0.7308	1.3	0.0893	0.9	0.73	551.3	5.0	557.0	5.5	581.5	19.2	551.3	5.0	94.8
370	163498	7.5	16.8315	0.8	0.7313	1.2	0.0893	0.9	0.74	551.5	4.8	557.3	5.3	582.2	17.8	551.5	4.8	94.7
536	286603	10.9	17.1528	1.0	0.7201	1.5	0.0896	1.1	0.72	553.3	5.8	550.7	6.4	541.0	22.8	553.3	5.8	102.3
186	58158	3.6	17.2377	0.6	0.7168	1.1	0.0897	0.9	0.82	553.5	4.6	548.8	4.5	530.3	13.6	553.5	4.6	104.4
149	66383	1.4	16.9038	0.9	0.7324	1.4	0.0898	1.1	0.79	554.5	5.8	557.9	5.9	572.9	18.5	554.5	5.8	96.8

308	1593719	3.8	16.9376	0.5	0.7334	1.0	0.0901	0.9	0.85	556.3	4.6	558.5	4.4	568.6	11.9	556.3	4.6	97.8
43	52894	34.5	16.5948	1.3	0.7486	1.7	0.0901	1.2	0.68	556.3	6.3	567.4	7.5	612.9	27.2	556.3	6.3	90.8
193	22213	2.4	16.9666	0.6	0.7350	1.4	0.0905	1.3	0.91	558.4	7.0	559.5	6.2	564.8	13.1	558.4	7.0	98.9
46	10868	1.2	17.1157	1.3	0.7313	1.6	0.0908	0.9	0.59	560.4	5.1	557.3	6.8	545.8	27.9	560.4	5.1	102.7
119	52872	1.5	16.9560	0.7	0.7446	1.4	0.0916	1.2	0.85	565.0	6.4	565.1	6.0	566.2	16.2	565.0	6.4	99.8
673	1172462	2.4	16.7104	0.7	0.7578	1.3	0.0919	1.1	0.85	566.7	5.9	572.8	5.6	597.9	14.5	566.7	5.9	94.8
328	150868	2.2	16.7770	0.8	0.7551	1.6	0.0919	1.3	0.86	566.9	7.2	571.2	6.8	589.3	17.2	566.9	7.2	96.2
333	63889	21.4	16.9031	0.8	0.7523	1.2	0.0923	0.9	0.74	569.0	4.9	569.6	5.3	573.0	17.7	569.0	4.9	99.3
128	41349	1.2	15.8963	1.0	0.8020	1.7	0.0925	1.4	0.83	570.3	7.8	597.9	7.8	705.1	20.3	570.3	7.8	80.9
55	19056	0.9	16.3702	1.5	0.7795	1.9	0.0926	1.2	0.64	570.8	6.8	585.2	8.6	642.3	32.0	570.8	6.8	88.9
581	271098	2.2	17.1268	0.6	0.7454	1.1	0.0926	0.9	0.83	571.1	5.1	565.6	4.9	544.3	13.7	571.1	5.1	104.9
330	117711	2.1	16.8943	0.9	0.7568	1.5	0.0928	1.2	0.82	571.9	6.7	572.2	6.6	574.2	18.6	571.9	6.7	99.6
133	37434	1.8	16.6000	0.8	0.7705	0.9	0.0928	0.5	0.52	572.1	2.7	580.1	4.1	612.2	17.3	572.1	2.7	93.4
110	760871	4.4	16.7619	1.1	0.7646	2.6	0.0930	2.4	0.91	573.2	13.0	576.7	11.5	591.2	23.8	573.2	13.0	97.0
311	50192	3.4	16.8824	0.7	0.7600	1.3	0.0931	1.1	0.85	573.8	5.9	574.0	5.6	575.7	14.8	573.8	5.9	99.7
377	691896	2.8	16.6018	0.9	0.7767	1.5	0.0936	1.1	0.79	576.6	6.3	583.6	6.4	612.0	19.4	576.6	6.3	94.2
487	775080	11.5	17.0493	0.7	0.7565	1.0	0.0936	0.8	0.76	576.7	4.3	572.0	4.4	554.3	14.4	576.7	4.3	104.0
23	5657	5.5	16.3001	2.5	0.7940	2.9	0.0939	1.4	0.50	578.6	7.9	593.5	13.0	651.5	53.7	578.6	7.9	88.8
86	37925	1.3	16.8466	1.1	0.7717	1.4	0.0943	0.9	0.65	581.1	5.1	580.7	6.3	580.3	23.8	581.1	5.1	100.1
377	68717	1.6	16.8992	0.9	0.7718	1.5	0.0946	1.3	0.81	582.9	7.0	580.8	6.8	573.5	19.4	582.9	7.0	101.6
257	69635	2.3	15.9214	1.1	0.8230	1.6	0.0951	1.1	0.69	585.5	6.1	609.7	7.3	701.8	24.4	585.5	6.1	83.4
184	84404	1.5	16.5286	0.8	0.7986	1.5	0.0958	1.3	0.85	589.6	7.4	596.0	6.9	621.5	17.6	589.6	7.4	94.9
431	88314	7.6	16.5319	0.6	0.8039	1.4	0.0964	1.3	0.90	593.5	7.1	599.0	6.3	621.1	13.2	593.5	7.1	95.6
81	100099	2.5	16.1715	1.3	0.8258	1.6	0.0969	1.0	0.63	596.2	5.9	611.3	7.6	668.5	27.3	596.2	5.9	89.2
422	79500	2.7	16.6275	0.7	0.8065	1.2	0.0973	1.0	0.79	598.6	5.6	600.5	5.5	608.6	16.0	598.6	5.6	98.3
89	28865	1.1	16.1154	0.9	0.8326	1.4	0.0974	1.0	0.76	598.9	6.0	615.1	6.3	675.9	19.1	598.9	6.0	88.6
285	41368	2.0	16.5362	0.8	0.8147	1.3	0.0977	1.1	0.82	601.2	6.3	605.1	6.1	620.5	16.3	601.2	6.3	96.9
163	84836	1.2	16.6738	0.7	0.8136	1.3	0.0984	1.1	0.83	605.2	6.4	604.5	6.1	602.6	16.1	605.2	6.4	100.4
359	124850	3.2	16.6222	0.8	0.8168	1.3	0.0985	1.0	0.80	605.7	5.8	606.3	5.8	609.3	16.4	605.7	5.8	99.4
255	68452	2.0	16.2294	0.8	0.8390	1.4	0.0988	1.1	0.79	607.3	6.3	618.6	6.3	660.8	18.0	607.3	6.3	91.9
174	65224	1.1	16.7101	0.8	0.8156	1.4	0.0989	1.2	0.81	607.9	6.7	605.6	6.5	597.9	18.2	607.9	6.7	101.7
117	70852	2.9	16.6041	0.9	0.8218	1.6	0.0990	1.2	0.80	608.6	7.2	609.0	7.2	611.7	20.5	608.6	7.2	99.5
122	42688	6.1	16.5973	0.9	0.8251	1.4	0.0994	1.0	0.72	610.7	5.7	610.9	6.2	612.6	20.4	610.7	5.7	99.7
480	93975	3.5	16.6246	0.8	0.8449	1.5	0.1019	1.2	0.85	625.7	7.4	621.9	6.8	609.0	16.7	625.7	7.4	102.7
388	126047	4.0	16.4537	0.6	0.8546	1.1	0.1020	0.9	0.85	626.3	5.6	627.2	5.1	631.4	12.3	626.3	5.6	99.2
210	26254	3.1	16.4470	0.9	0.8567	3.3	0.1022	3.1	0.96	627.5	18.7	628.3	15.3	632.2	20.2	627.5	18.7	99.3
476	142705	6.6	16.3824	0.9	0.8652	1.6	0.1028	1.3	0.80	631.1	7.6	633.0	7.4	640.7	20.1	631.1	7.6	98.5
53	10488	2.0	16.2831	1.5	0.8795	1.9	0.1039	1.1	0.58	637.3	6.8	640.7	9.1	653.7	33.2	637.3	6.8	97.5
295	116486	1.4	16.1333	0.7	0.8879	1.1	0.1039	0.9	0.79	637.4	5.3	645.2	5.3	673.5	14.4	637.4	5.3	94.6
407	385153	8.9	16.0224	1.0	0.8963	2.1	0.1042	1.9	0.89	639.0	11.6	649.7	10.3	688.3	20.4	639.0	11.6	92.8
394	64781	21.3	15.3058	1.0	0.9623	2.1	0.1069	1.8	0.87	654.5	11.4	684.5	10.5	785.1	21.8	654.5	11.4	83.4
115	27906	1.9	16.0575	0.8	0.9407	1.3	0.1096	1.0	0.77	670.5	6.5	673.3	6.5	683.6	18.1	670.5	6.5	98.1
266	67562	9.5	16.0817	0.7	0.9779	1.4	0.1141	1.2	0.85	696.6	8.0	692.5	7.1	680.4	16.0	696.6	8.0	102.4
575	324274	11.2	15.6272	1.3	1.0277	2.3	0.1165	2.0	0.84	710.6	13.2	717.8	12.1	741.3	27.1	710.6	13.2	95.9
218	32399	1.7	14.5414	1.1	1.1167	1.7	0.1178	1.2	0.72	718.1	8.1	761.4	8.8	891.8	23.7	718.1	8.1	80.5
431	90180	4.0	14.6371	1.2	1.1384	2.0	0.1209	1.5	0.78	735.8	10.7	771.8	10.6	878.3	25.3	735.8	10.7	83.8
295	44117	7.0	15.3539	0.7	1.1312	1.4	0.1260	1.2	0.86	765.1	8.9	768.3	7.8	778.5	15.6	765.1	8.9	98.3
332	266089	11.5	14.1322	1.0	1.3027	1.5	0.1336	1.2	0.78	808.3	9.1	846.9	8.8	950.5	19.7	808.3	9.1	85.0
301	138410	5.0	14.2186	0.9	1.3085	1.6	0.1350	1.3	0.81	816.3	9.9	849.4	9.2	938.0	19.3	816.3	9.9	87.0
236	66071	7.6	14.2792	0.8	1.3111	2.5	0.1358	2.4	0.95	821.1	18.7	850.6	14.7	929.3	15.8	821.1	18.7	88.4
503	11691	3.7	14.3441	0.8	1.3814	2.3	0.1438	2.1	0.94	866.0	17.2	881.1	13.3	920.0	15.8	866.0	17.2	94.1
292	147424	2.6	14.2741	1.7	1.4107	2.5	0.1461	1.7	0.70	879.1	14.2	893.5	14.6	930.0	35.8	930.0	35.8	94.5
405	96119	10.2	14.1293	1.7	1.3919	2.2	0.1427	1.4	0.64	859.9	11.6	885.5	13.3	950.9	35.3	950.9	35.3	90.4
110	108846	2.7	14.0523	1.9	1.3829	3.5	0.1410	2.9	0.84	850.3	23.3	881.7	20.6	962.1	39.2	962.1	39.2	88.4
145	64451	1.1	13.8934	0.7	1.5040	1.2	0.1516	1.0	0.81	910.0	8.5	932.0	7.5	985.3	14.6	985.3	14.6	92.4
175	59950	3.2	13.8536	2.0	1.5879	2.6	0.1596	1.8	0.67	954.6	15.6	965.5	16.4	991.1	39.9	991.1	39.9	96.3
115	579190	2.1	13.8528	1.7	1.4754	3.3	0.1483	2.8	0.86	891.4	23.6	920.3	19.9	991.3	34.2	991.3	34.2	89.9
224	75193	2.2	13.6817	0.7	1.6283	1.0	0.1616	0.8	0.75	965.9	7.0	981.2	6.6	1016.4	13.9	1016.4	13.9	95.0
110	67172	1.6	13.6787	1.9	1.6158	2.5	0.1604	1.5	0.62	958.8	13.6	976.4	15.4	1016.9	39.2	1016.9	39.2	94.3
186	137463	1.1	13.4523	0.9	1.7534	1.5	0.1711	1.2	0.81	1018.4	11.5	1028.4	9.7	1050.6	17.8	1050.6	17.8	96.9
230	946010	5.4	13.3542	0.7	1.8675	1.4	0.1810	1.3	0.89	1072.2	12.5	1069.6	9.4	1065.4	13.2	1065.4	13.2	100.6
446	77422	3.0	13.2629	0.7	1.7894	1.2	0.1722	0.9	0.76	1024.2	8.3	1041.6	7.5	1079.1	15.0	1079.1	15.0	94.9

125	123602	2.0	13.2109	0.8	1.5347	2.7	0.1471	2.6	0.95	884.7	21.6	944.4	16.8	1087.0	16.2	1087.0	16.2	81.4
53	63025	1.5	13.1758	1.3	1.9108	2.0	0.1827	1.5	0.75	1081.6	14.8	1084.9	13.2	1092.3	26.1	1092.3	26.1	99.0
121	43674	2.0	13.0986	1.7	1.5624	3.5	0.1485	3.1	0.87	892.5	25.7	955.4	21.8	1104.1	34.4	1104.1	34.4	80.8
166	60413	3.8	13.0706	0.9	1.8723	1.1	0.1776	0.7	0.62	1053.6	6.8	1071.3	7.6	1108.4	18.0	1108.4	18.0	95.1
24	6201	2.6	13.0167	1.5	1.9214	2.0	0.1815	1.3	0.65	1075.0	13.1	1088.6	13.6	1116.7	30.9	1116.7	30.9	96.3
397	95351	15.5	12.9474	1.1	2.0438	2.2	0.1920	1.9	0.86	1132.2	20.0	1130.2	15.3	1127.3	22.8	1127.3	22.8	100.4
159	71948	2.3	12.8570	0.8	1.8604	1.9	0.1735	1.6	0.89	1031.6	15.7	1067.1	12.2	1141.2	16.7	1141.2	16.7	90.4
321	299861	13.2	12.6167	0.7	2.1757	1.4	0.1992	1.2	0.87	1170.9	12.5	1173.3	9.4	1178.7	13.4	1178.7	13.4	99.3
185	1189955	4.5	12.4919	0.7	2.0684	1.2	0.1875	0.9	0.77	1107.7	9.2	1138.4	8.0	1198.3	14.5	1198.3	14.5	92.4
481	30570	5.0	12.2163	1.1	2.1645	1.3	0.1919	0.8	0.61	1131.4	8.4	1169.7	9.2	1242.1	20.6	1242.1	20.6	91.1
256	18330	3.3	12.0716	0.9	2.0992	1.5	0.1839	1.1	0.78	1088.1	11.5	1148.5	10.1	1265.4	18.0	1265.4	18.0	86.0
247	76507	1.7	11.4866	1.0	2.5331	1.5	0.2111	1.1	0.74	1234.8	12.3	1281.6	10.8	1361.8	19.1	1361.8	19.1	90.7
171	153096	1.9	11.3310	0.7	2.6429	1.2	0.2173	1.0	0.83	1267.6	11.6	1312.7	9.0	1388.0	13.0	1388.0	13.0	91.3
201	168135	9.5	9.5151	6.0	3.5945	6.4	0.2482	2.1	0.33	1429.0	27.2	1548.3	50.9	1716.0	111.2	1716.0	111.2	83.3
393	88618	7.9	9.2240	0.5	4.8872	1.1	0.3271	1.0	0.89	1824.3	15.7	1800.1	9.4	1772.9	9.4	1772.9	9.4	102.9
672	606053	4.5	8.0692	0.9	5.0147	2.0	0.2936	1.8	0.89	1659.5	26.1	1821.8	16.9	2013.5	15.8	2013.5	15.8	82.4
301	714928	3.2	7.9128	0.8	6.4062	1.6	0.3678	1.4	0.86	2019.1	24.2	2033.1	14.3	2048.2	14.8	2048.2	14.8	98.6
640	173569	3.4	6.2177	0.7	9.0140	1.7	0.4067	1.6	0.92	2199.6	30.0	2339.4	16.0	2464.4	11.4	2464.4	11.4	89.3
115	61324	3.3	4.2500	1.1	18.6155	1.8	0.5741	1.4	0.80	2924.4	33.5	3022.1	17.2	3088.4	17.0	3088.4	17.0	94.7
214	201037	111.5	4.1434	0.7	18.4422	1.3	0.5544	1.2	0.86	2843.6	26.7	3013.1	13.0	3128.9	10.9	3128.9	10.9	90.9

125-250 µm

					Isotope ratios					Apparent ages (Ma)								
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
258	47558	5.1	16.1488	0.9	0.6994	1.5	0.0819	1.2	0.80	507.7	5.7	538.4	6.1	671.5	18.6	507.7	5.7	75.6
142	14315	2.7	14.6416	1.2	1.2319	1.6	0.1309	1.0	0.66	792.9	7.8	815.2	8.9	877.6	24.4	792.9	7.8	90.3
267	159796	3.4	13.8186	0.7	1.6730	1.7	0.1677	1.5	0.91	999.7	14.0	998.3	10.6	996.2	14.0	996.2	14.0	100.3

PS 1278-1 44-46 cm

63-125 µm

					Isotope ratios					Apparent ages (Ma)								
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
210	733	1.1	5.9694	2.8	0.4615	3.2	0.0200	1.5	0.48	127.6	2.0	385.3	10.3	2533.0	47.1	127.6	2.0	NA
910	101343	0.9	19.5523	0.6	0.2896	1.2	0.0411	1.0	0.87	259.5	2.6	258.2	2.7	247.4	13.4	259.5	2.6	NA
51	6593	1.8	17.4943	1.4	0.6317	2.0	0.0802	1.4	0.70	497.3	6.6	497.2	7.8	497.8	31.2	497.3	6.6	99.9
316	127190	27.6	17.5577	0.8	0.6327	2.6	0.0806	2.5	0.95	499.8	11.9	497.8	10.3	489.8	18.3	499.8	11.9	102.0
78	42012	2.8	17.1251	1.5	0.6507	1.9	0.0809	1.1	0.58	501.2	5.3	508.9	7.6	544.6	33.7	501.2	5.3	92.0
751	77883	0.7	17.2221	0.7	0.6535	1.3	0.0817	1.1	0.84	506.0	5.5	510.6	5.4	532.2	15.7	506.0	5.5	95.1
158	110806	1.7	17.1764	0.8	0.6601	1.1	0.0823	0.8	0.73	509.7	3.9	514.7	4.4	538.0	16.5	509.7	3.9	94.7
343	51488	1.9	17.2665	1.0	0.6574	1.4	0.0824	1.0	0.69	510.2	4.8	513.0	5.8	526.6	22.8	510.2	4.8	96.9
122	15356	1.8	17.1210	1.2	0.6655	1.8	0.0827	1.3	0.73	512.0	6.4	518.0	7.2	545.1	26.5	512.0	6.4	93.9
1195	124354	4.8	17.1656	0.6	0.6672	1.3	0.0831	1.1	0.87	514.6	5.4	519.0	5.1	539.4	13.7	514.6	5.4	95.4
73	27951	2.1	17.1372	1.4	0.6719	1.7	0.0835	0.9	0.56	517.3	4.6	521.9	6.8	543.0	30.1	517.3	4.6	95.3
525	121839	7.1	17.0807	0.8	0.6742	1.3	0.0836	1.1	0.82	517.3	5.3	523.3	5.3	550.2	16.4	517.3	5.3	94.0
230	42837	1.7	17.3162	0.9	0.6679	1.7	0.0839	1.5	0.86	519.4	7.4	519.4	7.0	520.3	19.1	519.4	7.4	99.8
142	42470	3.8	17.4196	0.7	0.6651	1.1	0.0841	0.9	0.79	520.3	4.5	517.7	4.7	507.2	15.5	520.3	4.5	102.6
210	88560	2.2	17.2468	1.2	0.6718	1.7	0.0841	1.2	0.69	520.4	5.8	521.8	6.9	529.1	26.8	520.4	5.8	98.4
80	50669	1.4	16.9159	1.0	0.6898	1.8	0.0847	1.5	0.83	523.9	7.4	532.7	7.3	571.4	21.6	523.9	7.4	91.7
167	60215	2.4	17.3112	0.8	0.6758	1.2	0.0849	0.9	0.74	525.2	4.5	524.3	4.9	520.9	17.6	525.2	4.5	100.8
188	68468	1.6	17.2901	0.6	0.6775	0.8	0.0850	0.5	0.66	525.9	2.7	525.3	3.4	523.6	13.5	525.9	2.7	100.4
278	12392	4.4	17.3947	1.0	0.6749	1.6	0.0852	1.3	0.79	527.0	6.6	523.7	6.7	510.3	21.9	527.0	6.6	103.3
166	15800	2.4	17.2941	1.1	0.6809	1.5	0.0854	1.1	0.70	528.5	5.4	527.3	6.2	523.0	23.7	528.5	5.4	101.0
376	47595	2.4	17.1186	0.9	0.6885	1.5	0.0855	1.3	0.82	529.0	6.4	531.9	6.4	545.4	19.1	529.0	6.4	97.0
410	277173	3.1	17.2050	0.7	0.6857	1.2	0.0856	1.0	0.83	529.5	5.1	530.2	5.0	534.4	14.7	529.5	5.1	99.1
165	19915	2.5	17.3003	1.1	0.6838	1.5	0.0858	1.1	0.73	530.9	5.7	529.1	6.4	522.3	23.3	530.9	5.7	101.7
310	2034462	3.9	17.2429	0.8	0.6878	1.5	0.0860	1.3	0.87	532.1	6.8	531.5	6.4	529.6	17.0	532.1	6.8	100.5
109	17720	0.8	17.3910	1.1	0.6830	1.5	0.0862	1.0	0.65	533.0	5.0	528.6	6.2	510.8	25.2	533.0	5.0	104.3
781	78602	18.0	16.9106	1.0	0.7082	1.5	0.0869	1.2	0.78	537.1	6.2	543.7	6.5	572.0	21.0	537.1	6.2	93.9
327	73493	2.9	17.0700	0.8	0.7024	1.4	0.0870	1.1	0.83	537.7	5.8	540.2	5.7	551.6	16.4	537.7	5.8	97.5
452	182308	1.0	17.2694	0.7	0.6963	1.3	0.0872	1.0	0.81	539.2	5.4	536.6	5.3	526.2	16.3	539.2	5.4	102.5
200	76135	4.2	17.2940	0.8	0.6953	1.4	0.0873	1.1	0.81	539.3	5.9	536.0	5.8	523.1	17.9	539.3	5.9	103.1
91	16822	1.4	16.5623	1.2	0.7262	1.4	0.0873	0.7	0.50	539.4	3.6	554.3	6.0	617.1	26.2	539.4	3.6	87.4
403	31411	16.9	17.0000	0.9	0.7082	1.5	0.0874	1.2	0.82	539.9	6.4	543.7	6.4	560.6	18.9	539.9	6.4	96.3
123	294477	0.6	16.6610	1.1	0.7263	1.6	0.0878	1.2	0.73	542.5	6.2	554.4	7.0	604.3	24.5	542.5	6.2	89.8
621	658203	2.9	16.7315	0.5	0.7264	1.0	0.0882	0.8	0.86	544.8	4.4	554.4	4.2	595.1	10.8	544.8	4.4	91.5
76	13018	1.4	17.1206	1.2	0.7168	1.6	0.0890	1.0	0.66	549.9	5.5	548.8	6.7	545.1	26.0	549.9	5.5	100.9
194	34703	2.3	17.2329	0.8	0.7121	1.1	0.0890	0.8	0.72	549.9	4.3	546.0	4.8	530.9	17.4	549.9	4.3	103.6
907	121732	23.1	17.1001	0.6	0.7177	1.0	0.0890	0.8	0.80	549.9	4.4	549.3	4.4	547.7	13.7	549.9	4.4	100.4
372	63843	2.3	17.1337	0.5	0.7198	0.8	0.0895	0.6	0.78	552.5	3.3	550.5	3.4	543.5	11.0	552.5	3.3	101.7
237	2154212	1.2	16.7737	0.7	0.7397	1.2	0.0900	0.9	0.79	555.7	5.0	562.2	5.2	589.7	15.9	555.7	5.0	94.2
142	36646	2.3	16.9624	0.8	0.7317	1.5	0.0901	1.3	0.85	555.9	6.7	557.6	6.4	565.4	16.9	555.9	6.7	98.3
466	67586	3.0	16.9844	0.6	0.7336	1.0	0.0904	0.8	0.81	558.0	4.3	558.7	4.3	562.5	12.9	558.0	4.3	99.2
130	106138	3.2	17.0016	1.2	0.7337	1.7	0.0905	1.2	0.72	558.5	6.4	558.7	7.1	560.4	25.3	558.5	6.4	99.7
509	62839	32.5	17.1155	0.6	0.7369	1.0	0.0915	0.8	0.79	564.4	4.2	560.6	4.2	545.8	13.1	564.4	4.2	103.4
213	21834	3.2	16.8191	0.7	0.7523	1.0	0.0918	0.7	0.74	566.2	3.9	569.6	4.3	583.8	14.2	566.2	3.9	97.0
613	99929	9.1	16.3735	1.1	0.7747	1.7	0.0920	1.3	0.78	567.6	7.3	582.5	7.6	641.9	23.1	567.6	7.3	88.4

693	79878	2.8	16.8012	0.7	0.7633	1.0	0.0931	0.7	0.72	573.6	3.9	575.9	4.3	586.2	14.9	573.6	3.9	97.9
390	63707	16.9	17.0116	0.5	0.7600	1.1	0.0938	0.9	0.87	578.1	5.1	574.0	4.7	559.1	11.7	578.1	5.1	103.4
71	18050	2.0	16.8137	1.1	0.7779	1.4	0.0949	0.8	0.59	584.4	4.6	584.3	6.2	584.5	24.2	584.4	4.6	100.0
339	41103	5.2	15.8201	0.7	0.8271	1.3	0.0949	1.1	0.83	584.7	6.1	612.0	6.0	715.3	15.5	584.7	6.1	81.7
808	61930	1.9	15.8446	0.6	0.8283	0.9	0.0952	0.7	0.74	586.4	3.9	612.7	4.3	712.0	13.5	586.4	3.9	82.4
312	635373	4.3	16.3189	0.9	0.8111	1.6	0.0960	1.4	0.84	591.2	7.7	603.1	7.4	649.0	18.7	591.2	7.7	91.1
494	82013	28.7	16.7515	0.7	0.7921	1.0	0.0963	0.7	0.74	592.5	4.1	592.3	4.4	592.6	14.4	592.5	4.1	100.0
1274	121297	5.7	16.3153	0.8	0.8166	2.5	0.0967	2.3	0.94	594.9	13.1	606.1	11.2	649.5	18.0	594.9	13.1	91.6
357	80267	4.9	16.6117	0.9	0.8102	1.6	0.0977	1.3	0.82	600.6	7.5	602.6	7.3	610.7	19.9	600.6	7.5	98.4
260	61753	4.0	16.0907	0.8	0.8385	1.1	0.0979	0.8	0.73	602.1	4.8	618.3	5.3	679.2	16.7	602.1	4.8	88.6
818	192062	2.9	16.0322	0.9	0.8431	1.4	0.0981	1.1	0.76	603.1	6.1	620.8	6.5	687.0	19.4	603.1	6.1	87.8
291	70053	4.0	16.5191	0.8	0.8241	1.9	0.0988	1.7	0.91	607.2	10.0	610.3	8.7	622.8	16.8	607.2	10.0	97.5
277	63722	3.0	16.6521	0.5	0.8214	1.4	0.0992	1.3	0.93	610.0	7.7	608.8	6.5	605.4	11.4	610.0	7.7	100.7
227	51030	7.3	16.6653	1.0	0.8211	4.7	0.0993	4.5	0.97	610.3	26.4	608.7	21.3	603.7	22.4	610.3	26.4	101.1
236	61912	1.8	16.4878	1.2	0.8312	2.0	0.0994	1.7	0.81	611.1	9.6	614.3	9.4	626.9	26.0	611.1	9.6	97.5
441	423595	4.9	16.5787	0.8	0.8301	1.2	0.0998	0.9	0.76	613.5	5.5	613.6	5.7	615.0	17.3	613.5	5.5	99.8
609	208191	6.4	15.9829	0.7	0.8888	1.6	0.1031	1.4	0.90	632.4	8.5	645.7	7.5	693.6	14.9	632.4	8.5	91.2
347	109682	3.9	16.4325	0.7	0.8652	1.0	0.1032	0.7	0.73	632.9	4.3	632.9	4.6	634.1	14.5	632.9	4.3	99.8
277	73498	25.6	16.3008	0.6	0.8900	0.8	0.1053	0.6	0.72	645.2	3.6	646.4	3.9	651.4	12.1	645.2	3.6	99.1
638	125193	19.5	15.7155	0.6	0.9320	1.2	0.1063	1.0	0.86	651.1	6.3	668.7	5.8	729.4	12.8	651.1	6.3	89.3
141	28436	1.8	16.2016	0.8	0.9045	1.3	0.1063	1.1	0.83	651.4	6.9	654.1	6.5	664.5	16.3	651.4	6.9	98.0
178	72674	1.1	15.9863	0.7	0.9268	1.7	0.1075	1.5	0.90	658.2	9.7	665.9	8.4	693.1	15.8	658.2	9.7	95.0
482	78595	9.1	16.3946	0.7	0.9131	1.3	0.1086	1.1	0.83	664.7	7.1	658.7	6.5	639.1	15.9	664.7	7.1	104.0
400	54045	5.6	15.4671	1.3	0.9707	2.3	0.1089	1.8	0.81	666.6	11.6	688.8	11.3	763.1	27.9	666.6	11.6	87.4
848	144232	3.9	15.5018	1.2	0.9872	1.9	0.1110	1.5	0.78	678.8	9.6	697.3	9.6	758.3	25.0	678.8	9.6	89.5
573	161900	5.9	16.1215	0.7	0.9586	1.9	0.1121	1.8	0.94	685.1	11.4	682.6	9.3	675.1	14.0	685.1	11.4	101.5
784	172959	8.6	15.5935	1.4	0.9920	2.7	0.1122	2.4	0.87	685.8	15.4	699.8	13.8	745.9	28.7	685.8	15.4	91.9
216	29405	2.9	15.1415	1.0	1.0305	1.5	0.1132	1.1	0.76	691.4	7.4	719.2	7.7	807.7	20.5	691.4	7.4	85.6
955	453287	4.7	15.8282	0.5	0.9902	0.8	0.1137	0.6	0.77	694.3	4.3	698.8	4.2	714.3	11.3	694.3	4.3	97.2
488	84389	6.9	15.5207	1.8	1.0305	2.2	0.1161	1.4	0.62	707.8	9.4	719.2	11.6	755.8	37.1	707.8	9.4	93.7
36	12149	13.9	15.9367	2.0	1.0211	3.3	0.1181	2.6	0.79	719.5	17.5	714.5	16.7	699.7	42.7	719.5	17.5	102.8
558	39234292	3.5	14.5468	0.6	1.1460	2.7	0.1210	2.7	0.97	736.1	18.6	775.4	14.9	891.1	13.4	736.1	18.6	82.6
136	80621	1.8	14.4521	0.8	1.2023	2.0	0.1261	1.9	0.92	765.4	13.4	801.6	11.2	904.5	16.8	765.4	13.4	84.6
59	13252	4.2	14.1941	1.9	1.2273	2.1	0.1264	0.8	0.39	767.3	6.0	813.1	11.8	941.6	39.9	767.3	6.0	81.5
211	79749	3.0	14.7918	1.6	1.1816	2.2	0.1268	1.6	0.70	769.7	11.4	792.0	12.3	856.4	33.0	769.7	11.4	89.9
456	1354146	5.4	15.3101	0.6	1.1591	1.4	0.1288	1.2	0.89	780.8	9.0	781.5	7.5	784.5	13.4	780.8	9.0	99.5
75	13657	38.8	14.3789	2.4	1.2832	3.4	0.1339	2.4	0.70	810.0	18.2	838.3	19.3	915.0	49.5	810.0	18.2	88.5
584	164464	7.9	14.4941	1.4	1.2838	2.2	0.1350	1.8	0.79	816.4	13.7	838.5	12.8	898.5	28.2	816.4	13.7	90.9
81	25416	1.2	14.2965	1.1	1.3279	1.6	0.1377	1.2	0.75	831.9	9.3	858.0	9.2	926.8	21.7	831.9	9.3	89.8
258	35145	2.7	14.3442	1.3	1.3466	2.8	0.1402	2.4	0.88	845.5	19.3	866.1	16.1	920.0	27.0	845.5	19.3	91.9
393	87148	4.3	14.6617	0.7	1.3386	1.4	0.1424	1.2	0.86	858.2	9.6	862.6	8.1	874.8	14.9	858.2	9.6	98.1
180	58259	3.0	14.2272	1.2	1.4521	2.1	0.1499	1.7	0.81	900.4	14.2	910.7	12.6	936.8	25.3	936.8	25.3	96.1
540	501351	5.4	14.0921	1.2	1.3737	2.1	0.1405	1.7	0.82	847.3	13.8	877.7	12.4	956.3	24.6	956.3	24.6	88.6
248	103189	3.2	14.0780	0.8	1.5077	2.5	0.1540	2.4	0.94	923.4	20.5	933.5	15.4	958.3	16.9	958.3	16.9	96.4
536	105219	1.9	13.9573	0.7	1.5397	1.3	0.1559	1.1	0.85	934.1	9.7	946.4	8.1	975.9	14.2	975.9	14.2	95.7
359	144839	4.0	13.8786	0.8	1.3976	1.9	0.1407	1.7	0.91	848.8	13.7	887.9	11.3	987.4	16.3	987.4	16.3	86.0
363	202250	3.4	13.8051	0.6	1.5280	1.2	0.1531	1.0	0.84	918.1	8.5	941.7	7.3	998.2	13.0	998.2	13.0	92.0
318	1209134	3.5	13.7739	0.7	1.6178	1.1	0.1617	0.9	0.80	966.1	8.1	977.1	7.1	1002.8	13.7	1002.8	13.7	96.3
272	60370	1.8	13.6265	0.6	1.5967	1.5	0.1579	1.4	0.92	944.9	11.9	968.9	9.2	1024.6	11.5	1024.6	11.5	92.2
824	197842	24.8	13.5820	1.4	1.5038	2.9	0.1482	2.5	0.87	890.9	21.2	931.9	17.8	1031.2	29.0	1031.2	29.0	86.4
396	73973	4.5	13.4653	0.7	1.7604	1.6	0.1720	1.5	0.89	1023.1	13.8	1031.0	10.6	1048.7	14.7	1048.7	14.7	97.6

225	170994	2.4	13.4375	0.8	1.8228	1.7	0.1777	1.5	0.89	1054.5	14.5	1053.7	11.0	1052.9	15.3	1052.9	15.3	100.2
24	60581	1.9	13.4288	1.8	1.6466	3.2	0.1604	2.6	0.82	959.2	23.4	988.2	20.1	1054.2	36.2	1054.2	36.2	91.0
48	21905	0.9	13.4139	0.9	1.6380	1.7	0.1594	1.5	0.85	953.6	12.9	984.9	10.8	1056.4	17.9	1056.4	17.9	90.3
220	26975	3.0	13.3970	0.5	1.8349	0.9	0.1784	0.7	0.83	1058.0	7.0	1058.0	5.7	1058.9	9.6	1058.9	9.6	99.9
68	75294	4.8	13.3867	0.9	1.8700	1.5	0.1816	1.2	0.81	1075.9	11.7	1070.5	9.7	1060.5	17.3	1060.5	17.3	101.5
175	64627	4.0	13.3778	0.8	1.8486	2.3	0.1794	2.2	0.94	1063.9	21.1	1062.9	15.1	1061.8	15.9	1061.8	15.9	100.2
201	190241	1.9	13.3075	0.6	1.8801	1.6	0.1815	1.5	0.92	1075.3	14.5	1074.1	10.5	1072.4	12.3	1072.4	12.3	100.3
159	30150	2.6	13.2555	0.9	1.9098	1.6	0.1837	1.3	0.82	1087.1	12.8	1084.5	10.4	1080.3	17.8	1080.3	17.8	100.6
430	433907	2.9	13.0919	0.6	1.9086	1.2	0.1813	1.1	0.86	1074.1	10.5	1084.1	8.3	1105.1	12.8	1105.1	12.8	97.2
42	26731	1.5	13.0872	2.2	1.7385	2.3	0.1651	0.9	0.37	985.0	7.9	1022.9	14.9	1105.8	43.0	1105.8	43.0	89.1
75	244438	2.5	13.0837	1.2	1.9537	1.7	0.1855	1.2	0.70	1096.8	11.9	1099.7	11.3	1106.4	24.1	1106.4	24.1	99.1
110	21072	4.8	13.0391	0.6	1.8856	2.5	0.1784	2.4	0.97	1058.2	23.2	1076.0	16.3	1113.2	12.2	1113.2	12.2	95.1
248	72406	1.4	13.0240	0.6	1.7230	1.3	0.1628	1.1	0.88	972.4	9.9	1017.1	8.0	1115.5	12.0	1115.5	12.0	87.2
163	29832	2.8	12.9079	0.8	1.6551	2.4	0.1550	2.2	0.94	929.0	19.4	991.5	15.2	1133.4	16.7	1133.4	16.7	82.0
574	100456	1.5	12.8835	0.9	1.7348	2.3	0.1622	2.2	0.93	968.8	19.6	1021.5	15.1	1137.2	17.2	1137.2	17.2	85.2
869	305728	5.0	12.7283	0.4	2.1510	0.9	0.1987	0.8	0.87	1168.1	8.2	1165.4	6.1	1161.2	8.7	1161.2	8.7	100.6
329	98688	2.0	12.4701	0.5	2.1392	1.8	0.1936	1.7	0.95	1140.6	17.6	1161.6	12.2	1201.7	10.7	1201.7	10.7	94.9
253	100154	1.7	12.4168	0.7	2.1885	1.2	0.1972	1.0	0.84	1160.1	10.9	1177.4	8.6	1210.1	13.3	1210.1	13.3	95.9
603	58036	8.2	12.2088	0.6	2.3038	1.0	0.2041	0.9	0.84	1197.2	9.3	1213.5	7.2	1243.3	10.9	1243.3	10.9	96.3
220	96188	2.0	11.5226	0.7	2.5117	1.9	0.2100	1.7	0.93	1228.8	19.5	1275.4	13.5	1355.7	12.8	1355.7	12.8	90.6
131	70348	0.7	11.4584	0.7	2.7071	1.1	0.2251	0.9	0.79	1308.6	10.4	1330.4	8.2	1366.5	13.1	1366.5	13.1	95.8
413	79892	1.0	11.1169	0.7	2.8772	1.5	0.2321	1.3	0.87	1345.4	16.0	1376.0	11.4	1424.5	14.1	1424.5	14.1	94.4
406	114947	14.5	10.8887	0.6	2.9654	1.2	0.2343	1.0	0.88	1356.9	12.8	1398.8	9.0	1464.0	10.6	1464.0	10.6	92.7
109	66818	1.0	10.6267	0.5	3.3976	0.8	0.2620	0.6	0.78	1499.9	8.3	1503.8	6.3	1510.2	9.5	1510.2	9.5	99.3
811	1539257	5.9	9.9392	0.7	4.0810	1.1	0.2943	0.8	0.71	1663.0	11.0	1650.5	8.6	1635.4	13.7	1635.4	13.7	101.7
1217	880902	5.9	9.9386	0.5	3.9950	0.9	0.2881	0.8	0.87	1632.0	11.6	1633.2	7.5	1635.5	8.6	1635.5	8.6	99.8
739	334694	6.0	9.7034	0.8	4.0915	3.8	0.2881	3.8	0.98	1631.9	54.1	1652.6	31.4	1679.9	15.4	1679.9	15.4	97.1
235	900565	10.9	9.6887	0.7	3.8243	2.0	0.2688	1.8	0.94	1535.0	25.2	1597.9	15.9	1682.7	12.6	1682.7	12.6	91.2
218	195438	3.4	9.6417	0.5	4.3242	0.9	0.3025	0.7	0.81	1703.8	11.1	1698.0	7.5	1691.6	9.8	1691.6	9.8	100.7
215	43106	1.3	9.5638	1.3	4.1908	2.1	0.2908	1.6	0.77	1645.6	23.7	1672.2	17.4	1706.6	24.8	1706.6	24.8	96.4
232	403153	1.8	9.3694	3.6	3.9175	4.7	0.2663	3.1	0.65	1522.1	41.5	1617.3	38.3	1744.3	66.3	1744.3	66.3	87.3
229	66617	1.3	9.1617	0.5	5.0603	0.8	0.3364	0.6	0.79	1869.3	10.3	1829.5	6.8	1785.3	8.9	1785.3	8.9	104.7
340	298714	2.2	9.1418	0.9	4.5404	2.1	0.3012	1.9	0.90	1697.1	28.4	1738.4	17.6	1789.2	16.8	1789.2	16.8	94.9
302	405699	4.0	8.9963	0.7	5.0204	1.2	0.3277	0.9	0.80	1827.3	15.1	1822.8	10.0	1818.4	12.9	1818.4	12.9	100.5
47	26443	1.1	8.3845	6.9	4.9153	7.3	0.2990	2.4	0.33	1686.5	35.6	1804.9	61.6	1945.3	123.3	1945.3	123.3	86.7
106	3579	2.5	7.4808	1.2	6.0729	1.5	0.3296	0.8	0.56	1836.6	12.9	1986.4	12.7	2146.8	21.1	2146.8	21.1	85.6

125-250 µm

					Isotope ratios						Apparent ages (Ma)							
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
473	96007	79.3	17.6154	1.0	0.6502	2.6	0.0831	2.4	0.91	514.6	11.6	508.6	10.3	482.6	23.1	514.6	11.6	106.6
504	302737	4.3	17.1317	1.3	0.6935	2.9	0.0862	2.6	0.89	533.1	13.1	534.9	12.0	543.7	28.7	533.1	13.1	98.0
352	1778852	8.1	16.1145	1.2	0.8783	3.0	0.1027	2.7	0.91	630.2	16.3	640.1	14.1	676.0	26.0	630.2	16.3	93.2
446	86785	5.3	14.6074	1.8	1.1200	3.9	0.1187	3.5	0.88	723.1	23.6	763.0	20.9	882.5	37.6	723.1	23.6	81.9
320	256464	3.7	12.8566	0.8	1.8562	2.6	0.1732	2.4	0.95	1029.5	23.2	1065.6	17.0	1141.3	16.2	1141.3	16.2	90.2
14	2729	0.2	3.6183	1.5	4.2832	2.9	0.1124	2.5	0.86	687.0	16.3	1690.1	23.9	3342.5	23.3	3342.5	23.3	20.6

PS 1216-1 35-36 cm

63-250 µm

					Isotope ratios						Apparent ages (Ma)							
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
467	235097	28.2	16.9963	0.8	0.7086	1.4	0.0874	1.1	0.82	540.1	5.9	543.9	5.9	561.0	17.2	540.1	5.9	96.3
398	66511	7.5	17.1426	0.9	0.7115	1.6	0.0885	1.3	0.82	546.6	6.8	545.6	6.7	542.3	19.8	546.6	6.8	100.8
143	101528	1.4	16.6410	1.0	0.7335	1.5	0.0886	1.1	0.72	547.0	5.6	558.6	6.3	606.9	22.0	547.0	5.6	90.1
103	10417	0.3	12.8068	1.0	0.9967	1.7	0.0926	1.3	0.79	571.0	7.1	702.1	8.4	1149.0	20.3	571.0	7.1	49.7
299	126332	1.4	16.1587	0.8	0.8244	1.3	0.0967	1.0	0.77	594.8	5.8	610.5	6.0	670.2	17.8	594.8	5.8	88.7
110	109254	4.8	14.4702	0.9	1.2559	1.4	0.1319	1.1	0.78	798.5	8.1	826.1	7.9	901.9	18.0	798.5	8.1	88.5
365	5924718	2.4	13.2922	1.0	1.8610	1.9	0.1795	1.6	0.85	1064.2	15.8	1067.3	12.6	1074.7	20.4	1074.7	20.4	99.0
197	119103	1.6	11.0479	0.8	3.1246	1.6	0.2505	1.4	0.86	1440.9	17.9	1438.8	12.3	1436.4	15.4	1436.4	15.4	100.3
60	3403	4.8	9.9661	5.0	1.3070	5.2	0.0945	1.4	0.26	582.2	7.5	848.8	29.9	1630.4	93.2	1630.4	93.2	35.7
79	28171	1.8	9.9202	3.1	2.4007	4.7	0.1728	3.6	0.76	1027.5	34.2	1242.8	33.9	1639.0	56.9	1639.0	56.9	62.7
509	3409	1.9	9.2963	2.6	1.1999	2.8	0.0809	0.9	0.32	501.7	4.2	800.5	15.3	1758.6	48.0	1758.6	48.0	28.5
18	559	0.9	2.8495	1.1	6.8137	1.4	0.1409	0.8	0.60	849.6	6.7	2087.5	12.6	3711.1	17.4	3711.1	17.4	22.9
7	381	12.0	1.9719	1.5	14.2552	3.3	0.2040	2.9	0.89	1196.5	31.7	2766.8	30.9	4262.1	NA	4262.1	NA	28.1

PS 1400-1 216-218 cm

63-250 µm

					Isotope ratios					Apparent ages (Ma)								
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
54	97469	1.3	19.9785	1.2	0.1964	1.5	0.0285	0.8	0.57	181.0	1.5	182.1	2.5	197.5	28.2	181.0	1.5	NA
51	2726	1.4	11.7752	5.4	0.3484	5.6	0.0298	1.3	0.24	189.1	2.5	303.5	14.6	1313.8	104.8	189.1	2.5	NA
35	10163	0.9	19.0799	2.2	0.2915	2.8	0.0404	1.7	0.63	255.1	4.4	259.8	6.4	303.4	49.1	255.1	4.4	NA
195	69205	1.6	19.6820	0.8	0.2840	1.3	0.0406	1.1	0.81	256.3	2.7	253.8	3.0	232.1	17.6	256.3	2.7	NA
32	147354	0.6	19.8066	1.4	0.2976	1.9	0.0428	1.2	0.65	270.0	3.2	264.5	4.4	217.6	33.4	270.0	3.2	NA
122	63589	0.6	17.5768	1.5	0.3601	4.0	0.0459	3.7	0.93	289.5	10.4	312.3	10.7	487.4	32.9	289.5	10.4	NA
33	4227	0.5	10.3053	6.6	0.8160	7.0	0.0610	2.1	0.30	381.8	7.9	605.8	31.8	1567.9	124.4	381.8	7.9	NA
158	183089	5.3	17.1675	0.8	0.6201	1.5	0.0772	1.3	0.85	479.7	5.9	489.9	5.8	539.1	17.4	479.7	5.9	89.0
239	43444	2.3	16.7420	0.8	0.6573	1.3	0.0798	1.1	0.82	495.2	5.1	513.0	5.3	593.8	16.4	495.2	5.1	83.4
205	99034	22.0	17.1020	0.9	0.6503	1.5	0.0807	1.3	0.83	500.3	6.0	508.7	6.1	547.5	18.7	500.3	6.0	91.4
678	153136	128.0	17.4661	0.4	0.6472	0.7	0.0820	0.5	0.78	508.1	2.6	506.7	2.7	501.3	9.3	508.1	2.6	101.4
259	148319	10.7	17.3114	1.1	0.6563	3.1	0.0824	2.9	0.93	510.6	14.0	512.3	12.3	520.9	24.2	510.6	14.0	98.0
139	94885	2.7	17.0953	0.9	0.6651	1.4	0.0825	1.0	0.73	511.0	4.9	517.7	5.6	548.4	20.7	511.0	4.9	93.2
144	37901	1.6	17.4715	0.8	0.6522	1.1	0.0827	0.8	0.72	512.1	3.8	509.8	4.3	500.7	16.6	512.1	3.8	102.3
208	49901	3.1	17.3594	0.8	0.6608	1.8	0.0832	1.6	0.90	515.4	8.1	515.1	7.3	514.8	17.0	515.4	8.1	100.1
78	76429	37.6	17.3904	1.1	0.6605	1.6	0.0833	1.2	0.72	516.1	5.8	514.9	6.5	510.9	24.4	516.1	5.8	101.0
98	52852	20.3	17.4984	1.0	0.6571	1.9	0.0834	1.6	0.84	516.5	8.0	512.8	7.7	497.2	22.8	516.5	8.0	103.9
207	90238	2.7	17.5168	0.6	0.6579	1.0	0.0836	0.8	0.78	517.7	3.8	513.3	4.0	494.9	13.6	517.7	3.8	104.6
141	47911	5.2	17.1591	1.2	0.6751	1.5	0.0841	0.9	0.63	520.3	4.7	523.8	6.1	540.3	25.6	520.3	4.7	96.3
160	365395	1.5	16.9445	0.9	0.6843	1.6	0.0841	1.4	0.85	520.8	6.8	529.4	6.6	567.7	18.5	520.8	6.8	91.7
149	121377	5.9	17.3688	0.9	0.6678	2.0	0.0842	1.8	0.89	520.9	9.0	519.4	8.3	513.6	20.7	520.9	9.0	101.4
118	62611	2.4	17.1171	1.1	0.6782	1.6	0.0842	1.1	0.71	521.3	5.6	525.7	6.4	545.6	23.9	521.3	5.6	95.6
108	41292	1.8	16.7080	1.1	0.6960	1.6	0.0844	1.1	0.71	522.2	5.6	536.4	6.5	598.2	23.7	522.2	5.6	87.3
348	946651	1.5	17.4186	0.9	0.6681	1.6	0.0844	1.3	0.84	522.6	6.7	519.6	6.4	507.3	19.0	522.6	6.7	103.0
75	37951	2.1	17.2138	1.6	0.6772	2.9	0.0846	2.4	0.84	523.4	12.1	525.1	11.7	533.3	34.2	523.4	12.1	98.1
129	83144	3.5	17.1363	0.9	0.6811	1.5	0.0847	1.2	0.80	524.0	6.0	527.4	6.1	543.2	19.5	524.0	6.0	96.5
186	107421	1.6	17.0008	0.9	0.6874	1.4	0.0848	1.0	0.76	524.6	5.2	531.2	5.6	560.5	19.4	524.6	5.2	93.6
62	25928	3.1	17.1364	0.8	0.6862	2.7	0.0853	2.6	0.95	527.8	13.0	530.5	11.2	543.1	18.2	527.8	13.0	97.2
90	116523	1.8	16.9879	0.9	0.6929	1.2	0.0854	0.8	0.69	528.3	4.1	534.5	4.9	562.1	18.8	528.3	4.1	94.0
55	96319	2.0	17.3458	0.9	0.6796	1.4	0.0855	1.1	0.80	529.1	5.8	526.6	5.9	516.5	19.1	529.1	5.8	102.4
407	151694	5.7	17.0022	0.9	0.6943	1.6	0.0857	1.3	0.82	529.8	6.8	535.4	6.7	560.3	20.1	529.8	6.8	94.6
158	71725	2.3	16.6749	0.9	0.7101	1.3	0.0859	0.9	0.68	531.3	4.4	544.8	5.4	602.5	20.5	531.3	4.4	88.2
70	94038	3.5	17.2442	1.2	0.6880	2.7	0.0861	2.5	0.89	532.4	12.5	531.6	11.3	529.4	26.8	532.4	12.5	100.6
300	125224	14.1	17.2488	0.8	0.6880	1.4	0.0861	1.1	0.79	532.5	5.5	531.6	5.6	528.8	18.2	532.5	5.5	100.7
56	13744	1.8	17.1476	1.2	0.6943	1.7	0.0864	1.3	0.72	534.1	6.4	535.4	7.3	541.7	26.6	534.1	6.4	98.6
33	26755	4.0	16.9671	1.3	0.7018	2.1	0.0864	1.7	0.79	534.2	8.7	539.9	9.0	564.8	28.8	534.2	8.7	94.6
180	119364	3.3	17.3980	0.6	0.6846	1.0	0.0864	0.8	0.80	534.4	4.1	529.6	4.1	509.9	13.3	534.4	4.1	104.8
441	821816	10.5	16.7821	1.4	0.7124	3.2	0.0868	2.9	0.91	536.3	14.9	546.2	13.5	588.6	29.4	536.3	14.9	91.1
217	98948	3.6	17.2828	0.9	0.6920	1.7	0.0868	1.4	0.83	536.4	7.2	534.0	7.0	524.5	20.7	536.4	7.2	102.3
203	628606	4.2	17.2846	0.8	0.6959	1.5	0.0873	1.2	0.85	539.4	6.4	536.3	6.1	524.2	16.9	539.4	6.4	102.9
142	45945	25.5	16.7253	1.3	0.7205	2.5	0.0874	2.2	0.86	540.4	11.2	551.0	10.7	596.0	27.6	540.4	11.2	90.7
418	193952	4.5	16.2852	0.8	0.7415	5.3	0.0876	5.2	0.99	541.4	27.0	563.3	22.8	653.5	17.6	541.4	27.0	82.8
213	60576	2.3	16.9364	0.7	0.7156	1.1	0.0879	0.9	0.78	543.3	4.6	548.1	4.8	568.8	15.4	543.3	4.6	95.5
82	159183	3.0	16.7721	0.9	0.7246	1.5	0.0882	1.2	0.80	544.8	6.1	553.4	6.2	589.9	19.0	544.8	6.1	92.4
196	69602	3.7	16.9464	0.9	0.7189	1.4	0.0884	1.1	0.79	546.0	6.0	550.0	6.1	567.5	19.2	546.0	6.0	96.2
114	179274	6.9	16.6571	0.9	0.7338	1.9	0.0887	1.6	0.87	547.8	8.5	558.8	8.0	604.8	19.5	547.8	8.5	90.6
47	58939	5.2	17.0138	1.1	0.7187	1.5	0.0887	1.0	0.67	548.0	5.5	549.9	6.6	558.8	25.1	548.0	5.5	98.1
178	85882	4.2	17.2045	0.9	0.7126	1.5	0.0889	1.3	0.81	549.3	6.6	546.3	6.5	534.5	19.8	549.3	6.6	102.8
280	114840	4.0	17.1173	0.9	0.7174	2.2	0.0891	2.0	0.91	550.3	10.6	549.2	9.4	545.6	20.1	550.3	10.6	100.9
442	85514	30.3	16.8816	1.0	0.7292	1.8	0.0893	1.5	0.84	551.5	7.9	556.1	7.7	575.8	21.3	551.5	7.9	95.8
240	76503	6.2	16.9979	0.6	0.7244	1.0	0.0893	0.8	0.78	551.7	4.0	553.3	4.1	560.9	13.2	551.7	4.0	98.4
77	52965	3.6	16.7756	0.8	0.7363	1.2	0.0896	1.0	0.78	553.3	5.1	560.3	5.4	589.4	17.0	553.3	5.1	93.9
33	9098	2.1	16.6951	1.4	0.7415	1.8	0.0898	1.1	0.61	554.5	5.7	563.3	7.7	599.9	30.7	554.5	5.7	92.4
235	466094	4.6	16.8585	1.0	0.7360	1.6	0.0900	1.3	0.78	555.7	6.8	560.1	7.0	578.8	22.2	555.7	6.8	96.0
273	534092	8.7	16.4174	1.7	0.7568	2.4	0.0902	1.7	0.69	556.4	8.9	572.2	10.6	636.1	37.5	556.4	8.9	87.5
159	77951	1.8	16.6261	0.8	0.7476	1.2	0.0902	0.8	0.71	556.7	4.4	566.9	5.0	608.8	17.7	556.7	4.4	91.4
14	9603	29.7	16.9946	2.1	0.7326	3.0	0.0903	2.1	0.71	557.5	11.2	558.1	12.8	561.3	45.7	557.5	11.2	99.3
32	75187	20.6	16.6821	1.2	0.7464	2.0	0.0903	1.6	0.81	557.6	8.5	566.1	8.6	601.5	25.3	557.6	8.5	92.7
67	554735	1.8	17.1596	0.9	0.7260	1.3	0.0904	1.0	0.75	557.8	5.3	554.2	5.6	540.2	19.0	557.8	5.3	103.3
209	100188	7.9	16.9148	1.3	0.7376	3.0	0.0905	2.7	0.90	558.7	14.5	561.0	12.9	571.5	28.5	558.7	14.5	97.8
179	1723154	2.1	16.9285	1.0	0.7383	1.6	0.0907	1.2	0.78	559.6	6.6	561.4	6.7	569.8	21.2	559.6	6.6	98.2
61	36882	1.8	17.0379	1.0	0.7348	1.4	0.0908	1.0	0.71	560.5	5.4	559.4	6.1	555.7	21.6	560.5	5.4	100.9
203	64110	23.6	16.0258	1.9	0.7815	2.2	0.0909	1.3	0.56	560.7	6.7	586.3	10.0	687.8	39.5	560.7	6.7	81.5
172	116639	3.2	16.5036	0.8	0.7588	2.4	0.0909	2.3	0.95	560.7	12.3	573.3	10.6	624.8	17.0	560.7	12.3	89.7
96	30579	0.7	16.9120	0.9	0.7440	1.3	0.0913	1.0	0.76	563.2	5.4	564.8	5.8	571.9	19.0	563.2	5.4	98.5
189	91854	4.0	16.6585	0.9	0.7569	1.5	0.0915	1.2	0.81	564.4	6.5	572.2	6.4	604.6	18.5	564.4	6.5	93.3
177	87011	53.4	16.7478	0.8	0.7536	1.4	0.0916	1.1	0.81	564.9	6.1	570.3	6.1	593.1	17.5	564.9	6.1	95.2
160	102189	1.9	16.8779	0.8	0.7516	1.5	0.0920	1.3	0.85	567.6	6.9	569.2	6.5	576.2	17.1	567.6	6.9	98.5
292	394049	4.3	16.7605	1.0	0.7599	2.0	0.0924	1.7	0.86	569.8	9.1	574.0	8.6	591.4	21.8	569.8	9.1	96.3
104	128011	3.7	16.6356	0.6	0.7799	1.2	0.0941	1.0	0.85	580.0	5.8	585.4	5.4	607.6	13.8	580.0	5.8	95.5
345	170120	4.0	16.2098	0.5	0.8113	0.9	0.0954	0.8	0.84	587.5	4.4	603.2	4.3	663.4	11.2	587.5	4.4	88.6
14	1066723	17.5	16.4079	1.8	0.8023	5.2	0.0955	4.9	0.94	588.0	27.4	598.1	23.5	637.4	39.5	588.0	27.4	92.3
235	68734	101.9	16.8741	1.0	0.7853	1.5	0.0961	1.1	0.73	591.8	6.1	588.5	6.6	576.8	21.8	591.8	6.1	102.6
162	102080	3.2	16.5870	1.1	0.8001	2.8	0.0963	2.6	0.92	592.6	14.5	596.9	12.5	613.9	23.2	592.6	14.5	96.5
537	273694	107.6	16.6842	1.0	0.8011	1.9	0.0970	1.7	0.86	596.7	9.6	597.5	8.8	601.3	21.5	596.7	9.6	99.2
134	798786	3.3	16.8057	0.8	0.7954	1.4	0.0970	1.1	0.81	596.7	6.4	594.2	6.3	585.6	18.0	596.7	6.4	101.9

37	19989	3.6	16.8259	1.3	0.8001	2.3	0.0977	1.9	0.84	600.8	11.0	596.9	10.3	582.9	27.3	600.8	11.0	103.1
422	333688	46.9	16.7208	0.9	0.8078	1.3	0.0980	1.0	0.74	602.7	5.7	601.2	6.1	596.5	19.6	602.7	5.7	101.0
207	140243	7.0	16.5954	0.7	0.8266	2.0	0.0995	1.8	0.93	611.7	10.6	611.7	9.0	612.8	15.8	611.7	10.6	99.8
134	34984	5.1	16.3103	0.8	0.8459	1.4	0.1001	1.2	0.84	615.1	6.9	622.4	6.6	650.2	16.6	615.1	6.9	94.6
291	117364	16.4	16.3891	1.0	0.8425	2.3	0.1002	2.0	0.90	615.5	12.0	620.5	10.6	639.8	21.9	615.5	12.0	96.2
124	100831	2.9	16.1069	0.8	0.8578	2.6	0.1002	2.5	0.95	615.9	14.5	628.9	12.1	677.0	16.7	615.9	14.5	91.0
124	409640	15.1	16.7816	0.9	0.8259	1.4	0.1006	1.0	0.75	617.7	6.1	611.3	6.3	588.7	19.6	617.7	6.1	104.9
86	54408	2.2	16.5584	1.0	0.8381	1.8	0.1007	1.5	0.85	618.5	8.9	618.1	8.3	617.6	20.5	618.5	8.9	100.1
150	277554	4.7	16.6412	0.9	0.8427	1.6	0.1018	1.4	0.85	624.7	8.1	620.6	7.5	606.9	18.4	624.7	8.1	102.9
62	33231	0.9	16.5816	0.9	0.8467	2.6	0.1019	2.4	0.94	625.3	14.4	622.8	12.0	614.6	19.3	625.3	14.4	101.7
413	62365	12.6	15.8403	1.0	0.8894	1.3	0.1022	0.9	0.69	627.4	5.6	646.0	6.4	712.6	20.7	627.4	5.6	88.0
79	25125	3.2	15.8959	1.0	0.8899	1.5	0.1026	1.2	0.78	629.9	7.1	646.3	7.3	705.1	20.2	629.9	7.1	89.3
294	1959787	20.7	16.2811	0.7	0.8715	1.2	0.1030	1.0	0.82	631.7	6.1	636.4	5.9	654.0	15.3	631.7	6.1	96.6
83	71968	5.1	16.3435	1.0	0.8741	1.6	0.1037	1.3	0.80	635.8	7.9	637.8	7.8	645.8	21.3	635.8	7.9	98.5
270	405347	16.5	16.1991	1.0	0.8886	1.8	0.1044	1.5	0.84	640.4	9.0	645.6	8.4	664.8	20.4	640.4	9.0	96.3
209	185114	6.6	16.3587	1.0	0.8804	2.4	0.1045	2.2	0.91	640.8	13.5	641.2	11.6	643.8	21.9	640.8	13.5	99.5
55	75297	2.9	16.3821	0.8	0.8817	1.2	0.1048	0.9	0.75	642.5	5.7	641.9	5.9	640.7	17.7	642.5	5.7	100.3
89	104011	4.5	16.3378	0.7	0.8866	1.2	0.1051	0.9	0.77	644.2	5.5	644.5	5.5	646.6	15.9	644.2	5.5	99.6
187	86047	19.1	15.6805	1.4	0.9244	2.9	0.1052	2.5	0.87	644.7	15.5	664.7	14.1	734.1	29.9	644.7	15.5	87.8
75	112418	2.5	16.1590	0.9	0.9019	3.8	0.1058	3.7	0.97	648.0	23.0	652.8	18.5	670.1	18.9	648.0	23.0	96.7
136	398426	2.5	16.5373	0.8	0.8813	1.5	0.1058	1.3	0.86	648.0	8.1	641.7	7.2	620.4	16.6	648.0	8.1	104.5
191	1364001	4.2	16.3179	0.9	0.8968	1.3	0.1062	0.9	0.68	650.5	5.5	650.0	6.2	649.2	20.4	650.5	5.5	100.2
85	34698	3.5	15.4501	0.8	0.9524	1.1	0.1068	0.7	0.63	653.9	4.3	679.3	5.4	765.4	17.6	653.9	4.3	85.4
248	89182	26.6	16.1597	1.4	0.9122	2.1	0.1070	1.6	0.74	655.1	9.8	658.2	10.4	670.1	31.0	655.1	9.8	97.8
149	152206	2.7	16.1127	1.7	0.9161	2.1	0.1071	1.3	0.62	655.9	8.2	660.3	10.3	676.3	35.8	655.9	8.2	97.0
210	240325	2.5	16.0535	0.8	0.9224	1.4	0.1074	1.1	0.80	657.9	6.9	663.6	6.8	684.2	18.0	657.9	6.9	96.2
858	979273	28.5	16.4019	0.7	0.9053	1.2	0.1077	0.9	0.81	659.6	6.0	654.5	5.7	638.1	14.8	659.6	6.0	103.4
348	24373	4.9	15.0965	1.6	0.9904	2.1	0.1085	1.3	0.62	663.9	8.1	698.9	10.5	814.0	34.2	663.9	8.1	81.6
72	499712	1.8	16.1107	0.9	0.9301	1.4	0.1087	1.1	0.76	665.4	6.9	667.7	7.0	676.5	20.0	665.4	6.9	98.3
306	1509565	5.6	15.9359	2.0	0.9479	3.3	0.1096	2.7	0.80	670.4	16.9	677.0	16.5	699.8	43.0	670.4	16.9	95.8
129	361731	1.9	16.3915	1.1	0.9224	1.9	0.1097	1.5	0.82	671.0	9.7	663.6	9.1	639.5	22.9	671.0	9.7	104.9
183	112876	6.2	15.1970	1.7	1.0052	2.7	0.1108	2.1	0.77	677.6	13.3	706.5	13.6	800.1	35.5	677.6	13.3	84.7
215	109370	8.9	15.7223	1.1	0.9827	2.1	0.1121	1.8	0.86	685.0	11.7	695.0	10.6	728.5	23.1	685.0	11.7	94.0
459	1218532	23.8	15.4349	0.8	1.0222	1.3	0.1145	1.0	0.76	698.7	6.3	715.0	6.4	767.5	17.2	698.7	6.3	91.0
404	509138	13.8	15.9610	0.6	1.0113	1.0	0.1171	0.9	0.85	714.0	6.0	709.5	5.4	696.4	11.9	714.0	6.0	102.5
291	166662	8.4	15.5195	1.2	1.0413	2.3	0.1173	1.9	0.85	714.7	13.1	724.5	11.8	755.9	25.3	714.7	13.1	94.6
414	61192	6.3	14.7213	1.2	1.1003	1.5	0.1175	0.8	0.56	716.3	5.6	753.5	8.0	866.4	25.8	716.3	5.6	82.7
146	87503	4.6	14.7003	1.1	1.1092	2.9	0.1183	2.6	0.92	720.8	18.1	757.8	15.4	869.3	23.3	720.8	18.1	82.9
353	169996	4.5	14.9390	0.8	1.1395	2.1	0.1235	1.9	0.92	750.8	13.7	772.3	11.4	835.9	17.1	750.8	13.7	89.8
179	80875	3.7	14.7042	1.1	1.1629	2.0	0.1241	1.7	0.83	754.0	11.9	783.3	10.9	868.8	22.9	754.0	11.9	86.8
255	380123	2.6	15.1787	1.4	1.1363	3.1	0.1251	2.8	0.90	760.1	20.0	770.8	16.8	802.6	29.1	760.1	20.0	94.7
101	137666	5.5	15.1365	1.3	1.1891	2.1	0.1306	1.6	0.78	791.3	12.2	795.5	11.6	808.4	27.3	791.3	12.2	97.9
254	214380	13.3	14.0554	0.9	1.5795	3.7	0.1611	3.6	0.97	962.8	32.4	962.2	23.2	961.7	17.8	961.7	17.8	100.1
277	196987	10.7	14.0478	0.9	1.5579	1.6	0.1588	1.3	0.83	950.1	11.8	953.6	10.0	962.8	18.7	962.8	18.7	98.7
69	96899	1.6	13.9925	0.8	1.5151	1.3	0.1538	1.1	0.80	922.4	9.0	936.5	8.0	970.8	16.0	970.8	16.0	95.0
115	271998	2.3	13.8561	1.0	1.5867	2.4	0.1595	2.2	0.91	954.2	19.4	965.0	15.0	990.8	20.1	990.8	20.1	96.3
55	107683	4.2	13.8452	0.8	1.6918	1.1	0.1700	0.7	0.65	1011.9	6.4	1005.5	6.7	992.3	16.2	992.3	16.2	102.0
78	85078	4.1	13.8044	0.6	1.7352	1.1	0.1738	0.9	0.81	1033.0	8.3	1021.7	6.9	998.3	12.7	998.3	12.7	103.5
129	189073	5.7	13.7693	1.8	1.3673	5.1	0.1366	4.8	0.94	825.5	37.2	875.0	30.0	1003.5	35.7	1003.5	35.7	82.3
55	106523	6.3	13.7596	0.7	1.6961	1.1	0.1693	0.9	0.80	1008.4	8.2	1007.0	7.1	1004.9	13.6	1004.9	13.6	100.3
85	121280	4.5	13.6854	0.7	1.7061	0.9	0.1694	0.6	0.65	1008.9	5.4	1010.8	5.6	1015.9	13.5	1015.9	13.5	99.3
34	159049	3.0	13.6728	1.1	1.6492	1.4	0.1636	0.9	0.61	976.9	7.8	989.3	8.9	1017.8	22.7	1017.8	22.7	96.0
197	25626667	2.1	13.6673	0.8	1.6080	1.7	0.1595	1.5	0.86	953.8	12.9	973.3	10.5	1018.6	17.1	1018.6	17.1	93.6
51	30577	5.3	13.6526	1.1	1.7257	1.7	0.1710	1.3	0.78	1017.4	12.6	1018.2	11.0	1020.7	21.5	1020.7	21.5	99.7
71	46892	1.3	13.6305	0.8	1.7212	1.2	0.1702	0.9	0.75	1013.4	8.1	1016.5	7.5	1024.0	15.7	1024.0	15.7	99.0
77	99753	2.6	13.6207	0.6	1.7407	1.0	0.1720	0.8	0.77	1023.3	7.3	1023.7	6.4	1025.5	13.0	1025.5	13.0	99.8

388	9542090	11.1	13.6054	0.7	1.7057	1.1	0.1684	0.9	0.79	1003.2	8.0	1010.7	7.0	1027.8	13.6	1027.8	13.6	97.6
66	43962	5.9	13.5973	0.7	1.7807	1.3	0.1757	1.1	0.84	1043.4	10.7	1038.5	8.7	1029.0	14.8	1029.0	14.8	101.4
172	147703	6.8	13.5551	0.8	1.6809	1.4	0.1653	1.1	0.81	986.3	10.5	1001.3	9.0	1035.2	17.0	1035.2	17.0	95.3
605	2187102	6.1	13.5285	1.5	1.5695	1.9	0.1541	1.2	0.60	923.7	9.9	958.2	11.9	1039.2	30.9	1039.2	30.9	88.9
229	252955	1.9	13.4949	1.2	1.6669	2.9	0.1632	2.6	0.91	974.6	23.8	996.0	18.4	1044.2	24.8	1044.2	24.8	93.3
19	635198	2.2	13.4429	1.0	1.8590	1.3	0.1813	0.8	0.63	1074.2	8.4	1066.6	8.8	1052.1	20.9	1052.1	20.9	102.1
217	179305	1.1	13.4175	0.8	1.8879	1.5	0.1838	1.3	0.83	1087.7	12.6	1076.9	10.0	1055.9	17.0	1055.9	17.0	103.0
100	85242	3.2	13.3976	1.4	1.8690	3.5	0.1817	3.2	0.92	1076.2	32.1	1070.2	23.2	1058.8	27.6	1058.8	27.6	101.6
84	75391	1.5	13.3624	0.7	1.7638	1.3	0.1710	1.1	0.87	1017.7	10.8	1032.3	8.5	1064.1	13.1	1064.1	13.1	95.6
211	6277357	6.3	13.3493	1.0	1.7648	1.8	0.1709	1.4	0.82	1017.3	13.5	1032.6	11.4	1066.1	20.4	1066.1	20.4	95.4
92	367836	4.2	13.3054	0.6	1.8450	2.4	0.1781	2.3	0.96	1056.7	22.7	1061.7	15.9	1072.7	12.8	1072.7	12.8	98.5
152	77259	4.5	13.2461	1.4	1.6545	3.2	0.1590	2.9	0.90	951.3	25.3	991.3	20.1	1081.7	27.7	1081.7	27.7	87.9
84	127422	2.6	13.2123	0.9	1.9616	1.4	0.1881	1.1	0.77	1110.8	10.8	1102.4	9.2	1086.8	17.4	1086.8	17.4	102.2
260	220459	12.0	13.2061	0.8	1.8456	1.3	0.1768	1.1	0.81	1049.7	10.5	1061.9	8.8	1087.8	15.5	1087.8	15.5	96.5
293	518317	10.9	13.1817	0.8	1.9061	1.5	0.1823	1.3	0.87	1079.6	13.3	1083.2	10.2	1091.4	15.2	1091.4	15.2	98.9
198	153124	11.3	13.1652	0.5	1.9770	0.8	0.1888	0.6	0.75	1115.1	5.9	1107.7	5.2	1094.0	10.2	1094.0	10.2	101.9
100	50676	4.0	13.1378	0.9	1.8720	1.2	0.1784	0.7	0.61	1058.5	7.1	1071.2	7.9	1098.1	18.9	1098.1	18.9	96.4
71	113708	4.0	13.0314	0.9	1.9577	2.0	0.1851	1.7	0.88	1094.8	17.3	1101.1	13.2	1114.4	18.9	1114.4	18.9	98.2
162	90323	7.7	12.9902	0.9	1.9062	1.6	0.1797	1.3	0.83	1065.2	12.7	1083.3	10.3	1120.7	17.1	1120.7	17.1	95.0
98	79025	2.1	12.9860	0.8	1.9663	1.1	0.1853	0.8	0.73	1095.7	8.1	1104.0	7.5	1121.4	15.2	1121.4	15.2	97.7
42	53764	1.9	12.6945	2.8	2.1608	3.4	0.1990	2.1	0.60	1170.1	22.1	1168.5	23.9	1166.5	54.5	1166.5	54.5	100.3
191	90051	4.7	12.6534	0.5	2.1161	1.4	0.1943	1.3	0.93	1144.5	14.1	1154.1	9.9	1172.9	10.3	1172.9	10.3	97.6
112	115561	6.8	12.3219	0.8	2.1892	1.4	0.1957	1.1	0.81	1152.3	11.8	1177.6	9.6	1225.2	15.6	1225.2	15.6	94.1
192	808716	4.0	11.6927	1.5	2.1786	2.9	0.1848	2.5	0.85	1093.3	24.9	1174.2	20.2	1327.4	29.3	1327.4	29.3	82.4
128	126195	1.4	10.2858	0.3	3.7097	0.7	0.2769	0.6	0.86	1575.6	8.2	1573.5	5.5	1571.5	6.5	1571.5	6.5	100.3
597	254320	6.5	9.7507	0.7	4.1232	1.5	0.2917	1.3	0.87	1650.1	18.7	1658.9	12.1	1670.9	13.5	1670.9	13.5	98.8
72	161299	0.9	9.6232	1.5	3.9911	2.1	0.2787	1.4	0.69	1584.7	19.9	1632.4	16.7	1695.2	27.4	1695.2	27.4	93.5
43	86716	2.2	9.2539	0.9	4.6581	1.4	0.3128	1.1	0.77	1754.3	16.2	1759.7	11.5	1767.0	16.2	1767.0	16.2	99.3
221	1308916	5.8	5.2642	0.6	13.2473	2.0	0.5060	1.9	0.96	2639.5	42.1	2697.4	19.2	2741.8	9.8	2741.8	9.8	96.3

PS 1400-1 278-280 cm

63-125 µm

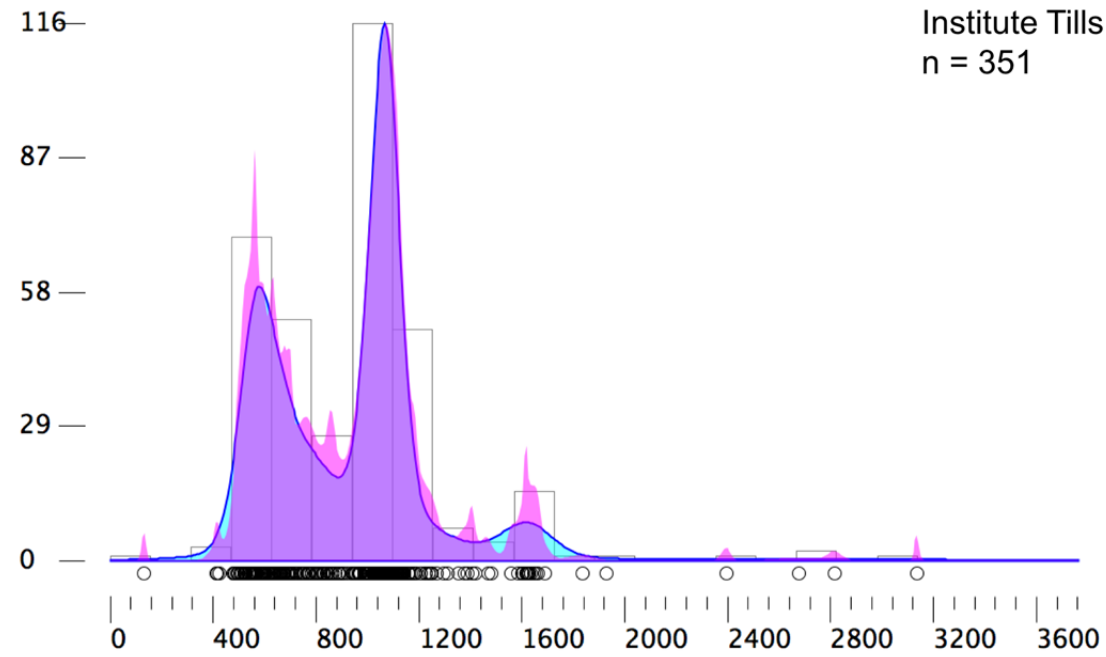
					Isotope ratios					Apparent ages (Ma)								
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
168	29581	4.7	17.0830	1.2	0.6632	2.4	0.0822	2.1	0.87	509.2	10.1	516.5	9.6	549.9	25.7	509.2	10.1	92.6
95	13927	1.9	17.0233	1.5	0.6758	2.7	0.0835	2.2	0.82	516.8	10.9	524.2	10.9	557.6	33.2	516.8	10.9	92.7
412	18939	2.8	17.2237	1.0	0.6715	2.3	0.0839	2.1	0.91	519.5	10.6	521.6	9.5	532.0	21.5	519.5	10.6	97.6
383	323750	1.6	16.8071	1.1	0.6930	2.3	0.0845	2.0	0.88	523.0	10.3	534.6	9.7	585.4	24.4	523.0	10.3	89.3
98	10069	1.6	17.2324	1.4	0.6838	2.6	0.0855	2.2	0.84	528.9	11.1	529.1	10.7	530.9	30.7	528.9	11.1	99.6
675	114401	53.0	17.3337	0.9	0.6803	2.1	0.0856	1.9	0.90	529.3	9.7	527.0	8.8	518.0	20.8	529.3	9.7	102.2
144	18783	1.2	17.1681	1.5	0.6881	2.3	0.0857	1.7	0.75	530.2	8.9	531.7	9.6	539.1	33.2	530.2	8.9	98.3
167	62813	2.6	17.1067	1.6	0.6920	2.9	0.0859	2.4	0.82	531.2	12.0	534.0	11.9	546.9	35.4	531.2	12.0	97.1
50	69732	2.3	16.6959	1.8	0.7121	2.7	0.0863	2.0	0.73	533.4	10.1	546.0	11.4	599.8	39.9	533.4	10.1	88.9
1298	93329	3.8	16.9885	1.3	0.7233	2.2	0.0892	1.7	0.81	550.5	9.2	552.6	9.2	562.0	27.8	550.5	9.2	98.0
508	43377	2.8	16.9934	1.1	0.7314	1.9	0.0902	1.5	0.81	556.6	8.1	557.4	8.1	561.4	24.0	556.6	8.1	99.1
23	320133	1.6	16.0287	2.2	0.8008	3.1	0.0931	2.2	0.72	574.1	12.4	597.3	14.2	687.4	46.6	574.1	12.4	83.5
1215	41895	10.5	16.4962	1.2	0.7852	2.0	0.0940	1.6	0.82	579.0	9.1	588.4	9.0	625.8	24.9	579.0	9.1	92.5
597	221623	6.1	16.7197	1.3	0.7748	2.2	0.0940	1.8	0.81	579.1	9.8	582.5	9.7	596.7	28.0	579.1	9.8	97.1
324	26719	6.3	16.5070	1.3	0.7877	2.7	0.0943	2.3	0.87	581.2	13.0	589.9	12.0	624.3	28.9	581.2	13.0	93.1
1419	133430	7.3	16.8731	1.2	0.7876	2.3	0.0964	2.0	0.86	593.4	11.3	589.8	10.4	576.9	25.9	593.4	11.3	102.9
112	46149	1.7	16.6617	1.6	0.8231	2.8	0.0995	2.3	0.83	611.5	13.5	609.8	12.8	604.2	34.1	611.5	13.5	101.2
120	24661	2.7	16.2628	1.3	0.8507	2.6	0.1004	2.2	0.86	616.7	13.1	625.1	12.1	656.4	28.7	616.7	13.1	93.9
179	27147	25.0	16.6198	1.6	0.8582	2.4	0.1035	1.8	0.75	634.8	10.8	629.1	11.2	609.6	33.9	634.8	10.8	104.1
887	144597	3.6	15.8544	1.1	0.9258	2.3	0.1065	2.0	0.88	652.4	12.7	665.4	11.3	710.7	23.3	652.4	12.7	91.8
596	90472	4.1	16.2980	1.2	0.9341	2.5	0.1105	2.2	0.88	675.5	14.0	669.8	12.1	651.8	25.2	675.5	14.0	103.6
140	11330	2.5	16.2508	1.2	0.9569	2.2	0.1128	1.9	0.84	689.2	12.1	681.7	11.0	658.0	26.2	689.2	12.1	104.7
164	52876	2.2	15.9976	1.3	1.0129	2.4	0.1176	2.0	0.83	716.6	13.3	710.3	12.1	691.6	28.6	716.6	13.3	103.6
490	62014	1.0	15.8244	1.2	1.0264	2.5	0.1179	2.1	0.88	718.2	14.6	717.1	12.6	714.8	25.2	718.2	14.6	100.5
154	19279	1.0	15.4143	2.1	1.0625	4.6	0.1188	4.1	0.89	723.9	28.2	735.1	24.1	770.3	44.0	723.9	28.2	94.0
1592	693991	2.3	14.0163	1.0	1.5287	2.1	0.1555	1.8	0.87	931.5	15.8	942.0	12.9	967.3	21.2	967.3	21.2	96.3
413	45667	2.7	13.9782	1.1	1.5935	2.3	0.1616	2.0	0.87	965.8	18.0	967.7	14.3	972.9	23.0	972.9	23.0	99.3
111	35206	0.6	13.9771	1.1	1.3669	2.2	0.1386	1.8	0.85	836.9	14.5	874.8	12.8	973.1	23.4	973.1	23.4	86.0
208	25331	8.4	13.7775	1.2	1.6541	2.4	0.1654	2.1	0.86	986.5	19.0	991.1	15.3	1002.3	25.3	1002.3	25.3	98.4
66	62787	3.3	13.7618	1.4	1.6864	2.2	0.1684	1.7	0.77	1003.2	15.5	1003.4	13.8	1004.6	28.2	1004.6	28.2	99.9
120	146037	3.3	13.6036	1.2	1.6821	2.1	0.1660	1.7	0.82	990.2	15.9	1001.8	13.5	1028.0	24.7	1028.0	24.7	96.3
421	66264	2.7	13.4975	1.3	1.8494	2.1	0.1811	1.7	0.78	1073.1	16.4	1063.2	14.1	1043.8	27.2	1043.8	27.2	102.8
50	8747	2.9	13.4222	1.7	1.7190	2.3	0.1674	1.6	0.68	997.9	14.6	1015.7	14.9	1055.2	34.4	1055.2	34.4	94.6
176	39071	2.9	13.3465	1.0	1.8263	1.9	0.1769	1.6	0.85	1049.8	15.5	1055.0	12.4	1066.5	20.3	1066.5	20.3	98.4
93	49045	2.3	13.2280	1.3	1.8646	2.2	0.1790	1.7	0.79	1061.3	16.9	1068.6	14.4	1084.4	26.7	1084.4	26.7	97.9
88	46187	3.3	12.9667	1.6	2.0184	2.7	0.1899	2.2	0.81	1120.8	22.8	1121.7	18.5	1124.3	32.0	1124.3	32.0	99.7
376	11256679	5.1	12.7469	1.0	1.8355	1.9	0.1698	1.6	0.86	1010.8	15.1	1058.3	12.3	1158.3	19.2	1158.3	19.2	87.3
454	36357	4.2	12.5875	1.1	2.0198	2.6	0.1845	2.3	0.91	1091.4	23.5	1122.2	17.5	1183.2	21.5	1183.2	21.5	92.2
210	78974	1.2	11.2142	1.5	2.7913	2.7	0.2271	2.2	0.82	1319.4	26.2	1353.2	20.0	1407.8	29.1	1407.8	29.1	93.7
487	34147	1.0	11.1891	1.3	2.9022	2.3	0.2356	2.0	0.84	1363.9	24.2	1382.5	17.7	1412.1	24.3	1412.1	24.3	96.6
568	27524	1.7	9.8271	0.9	3.3794	2.3	0.2410	2.1	0.92	1391.7	26.8	1499.6	18.2	1656.4	16.6	1656.4	16.6	84.0
178	439144	1.5	5.7462	1.2	11.6073	2.4	0.4840	2.1	0.87	2544.5	43.3	2573.3	22.2	2596.7	19.8	2596.7	19.8	98.0

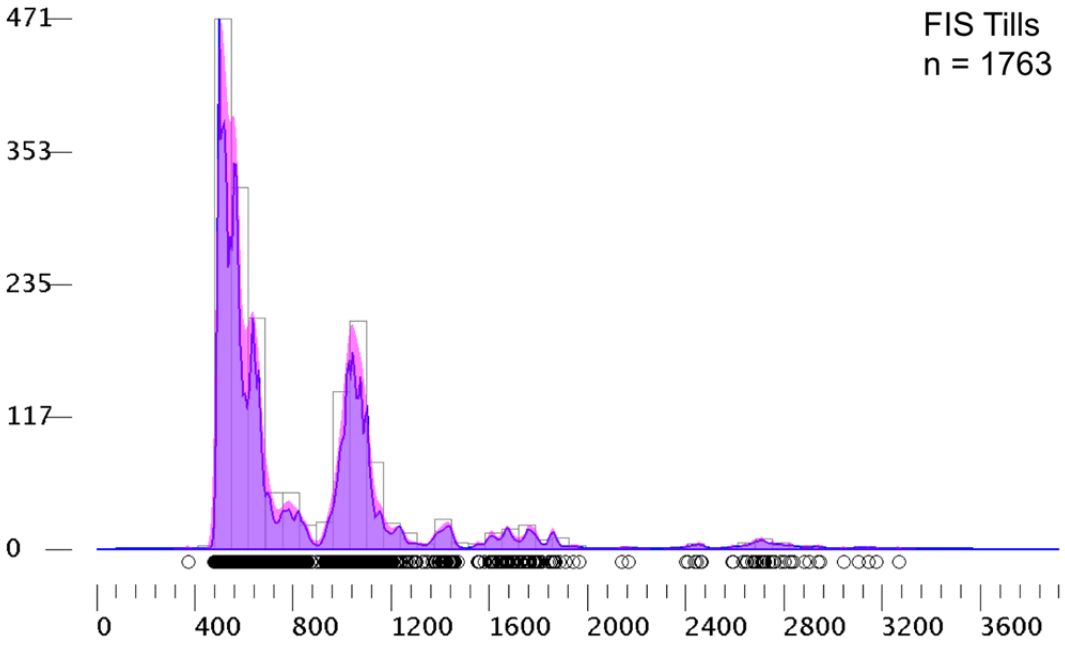
125-250 µm

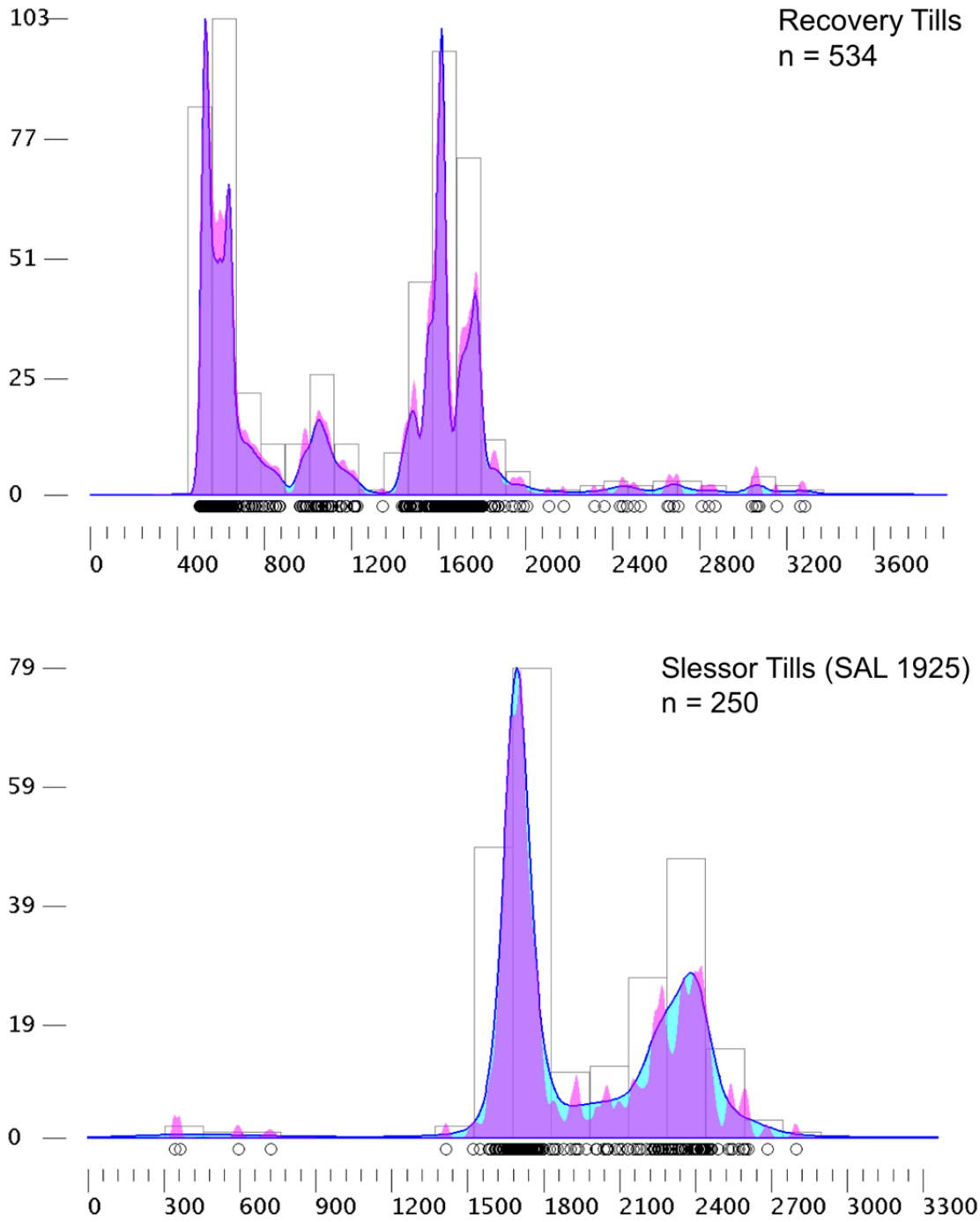
					Isotope ratios					Apparent ages (Ma)								
U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
196	1319341	7.8	17.2848	0.7	0.6386	1.1	0.0801	0.8	0.78	496.6	4.0	501.4	4.3	524.2	14.6	496.6	4.0	94.7
182	109422	5.4	17.2874	0.8	0.6402	1.2	0.0803	0.9	0.75	498.0	4.3	502.4	4.7	523.9	17.4	498.0	4.3	95.0
203	109961	21.2	17.1652	1.1	0.6613	1.8	0.0824	1.5	0.81	510.2	7.2	515.4	7.3	539.4	23.3	510.2	7.2	94.6
436	96834	52.9	17.4164	0.7	0.6615	1.5	0.0836	1.4	0.88	517.6	6.7	515.6	6.2	507.6	16.1	517.6	6.7	102.0
76	157681	2.3	17.0980	1.0	0.6757	1.3	0.0838	0.9	0.69	518.9	4.6	524.2	5.4	548.1	20.9	518.9	4.6	94.7
135	83499	1.6	17.0003	0.7	0.6987	1.3	0.0862	1.1	0.86	532.9	5.7	538.0	5.4	560.5	14.2	532.9	5.7	95.1
99	26095	13.4	16.9700	1.0	0.7193	1.6	0.0886	1.1	0.74	547.1	6.0	550.3	6.6	564.4	22.8	547.1	6.0	96.9
172	79779	7.4	16.6685	0.9	0.7390	1.6	0.0894	1.3	0.82	551.9	7.0	561.8	6.9	603.3	20.0	551.9	7.0	91.5
262	39232	3.3	16.2530	1.0	0.7656	2.1	0.0903	1.8	0.88	557.2	9.8	577.2	9.2	657.7	21.5	557.2	9.8	84.7
146	90394	2.0	17.3824	1.1	0.7359	1.9	0.0928	1.6	0.81	572.2	8.7	560.0	8.4	511.9	24.8	572.2	8.7	111.8
348	117575	4.3	16.5945	0.8	0.8065	1.5	0.0971	1.2	0.84	597.4	7.1	600.5	6.7	612.9	17.1	597.4	7.1	97.5
70	117481	2.7	17.1479	1.1	0.8049	1.9	0.1001	1.5	0.81	615.3	8.8	599.6	8.4	541.7	23.9	615.3	8.8	113.6
211	90053	2.1	16.1581	0.9	0.9580	1.7	0.1123	1.4	0.83	686.2	9.0	682.2	8.2	670.3	19.6	686.2	9.0	102.4
190	25204	3.0	12.2846	1.0	1.6033	1.6	0.1429	1.3	0.78	861.1	10.4	971.5	10.3	1231.2	20.1	1231.2	20.1	69.9
349	12023	1.7	11.9068	1.9	1.5525	2.7	0.1341	1.9	0.71	811.3	14.8	951.5	16.9	1292.2	37.7	1292.2	37.7	62.8
45	147142	9.7	4.7518	1.0	14.7847	2.5	0.5098	2.3	0.92	2655.6	49.7	2801.5	23.5	2909.0	15.5	2909.0	15.5	91.3

Appendix E: Kernel Density Estimate (KDE) plots

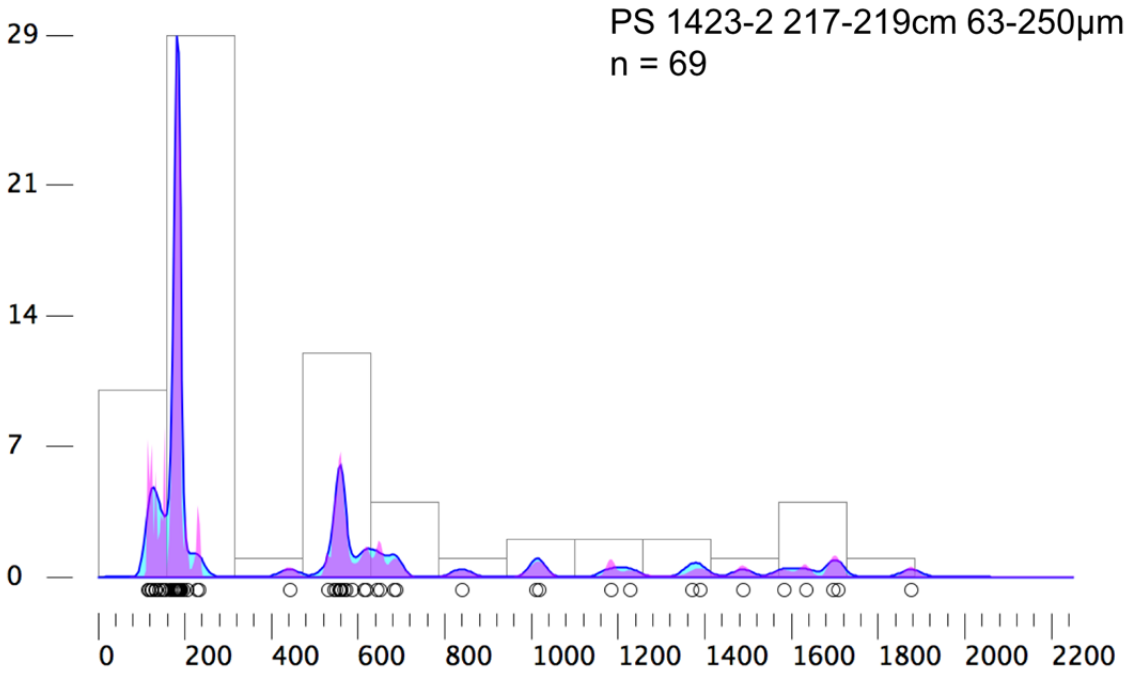
Onshore Tills

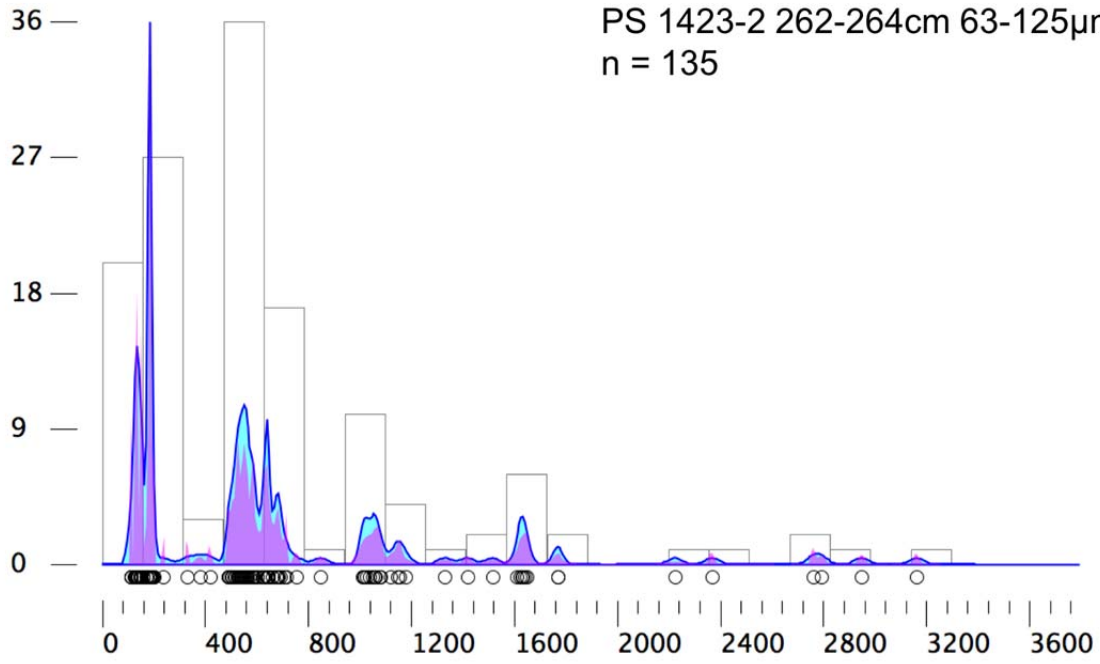


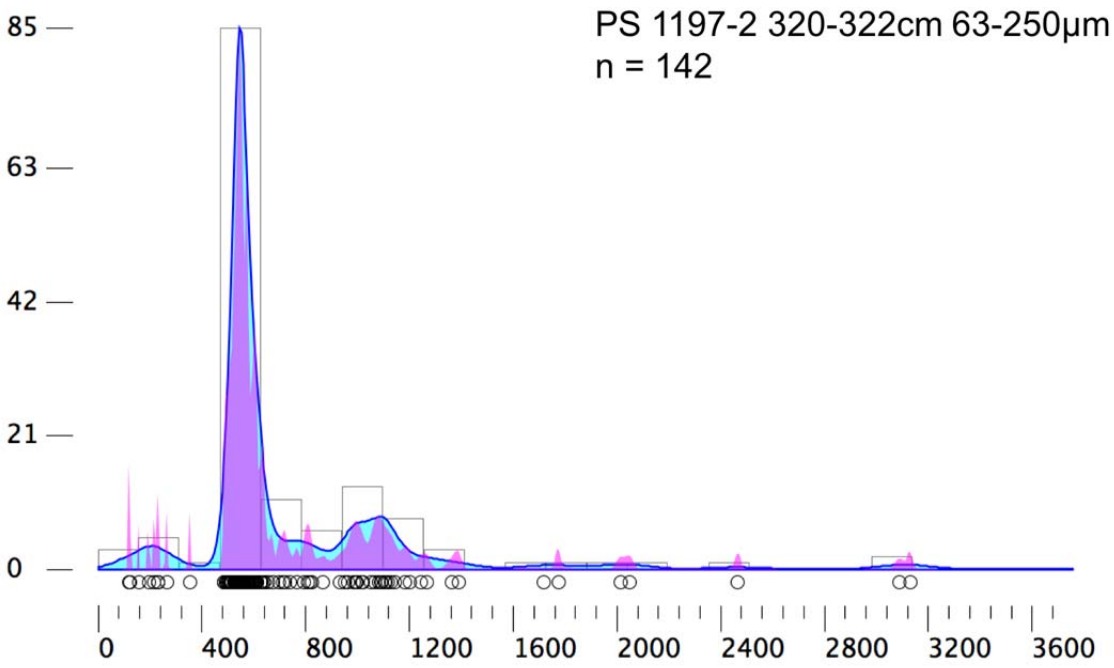


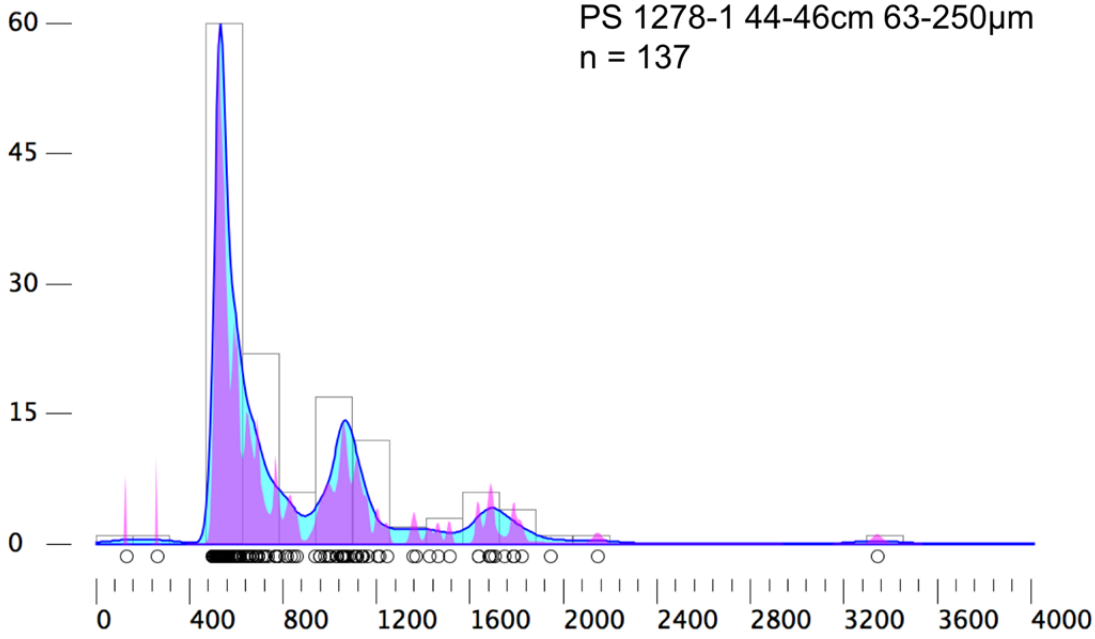

Recovery Tills
n = 534
103
77
51
25
0
0
400
800
1200
1600
2000
2400
2800
3200
3600
Slessor Tills (SAL 1925)
n = 250
79
59
39
19
0
0
300
600
900
1200
1500
1800
2100
2400
2700
3000
3300

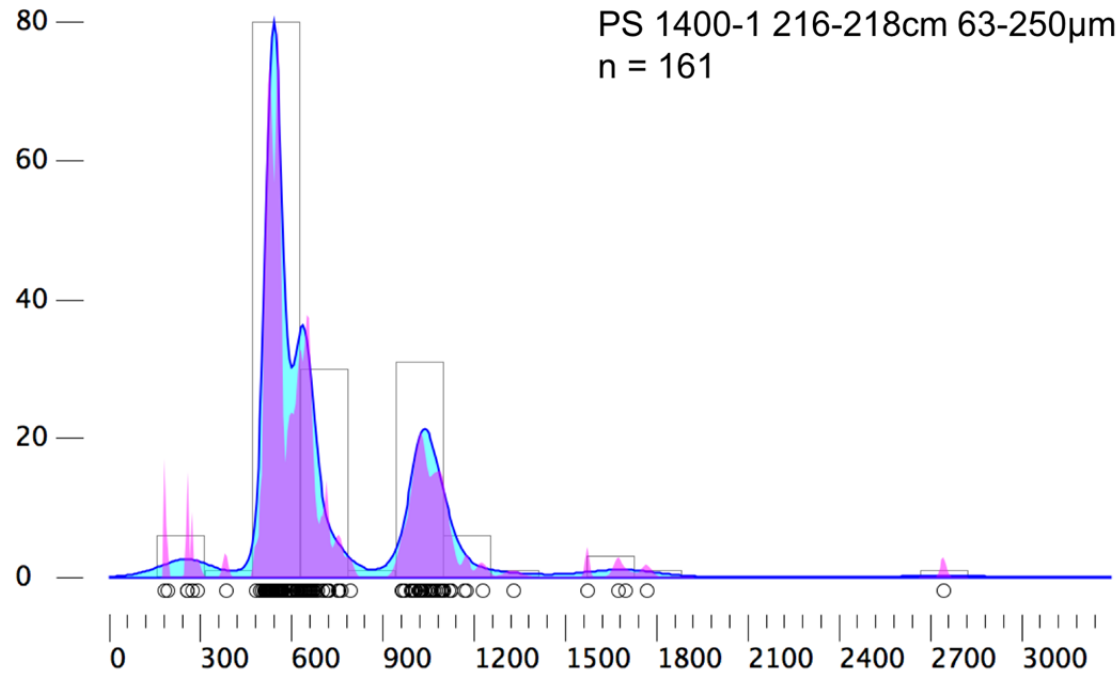
Offshore Tills

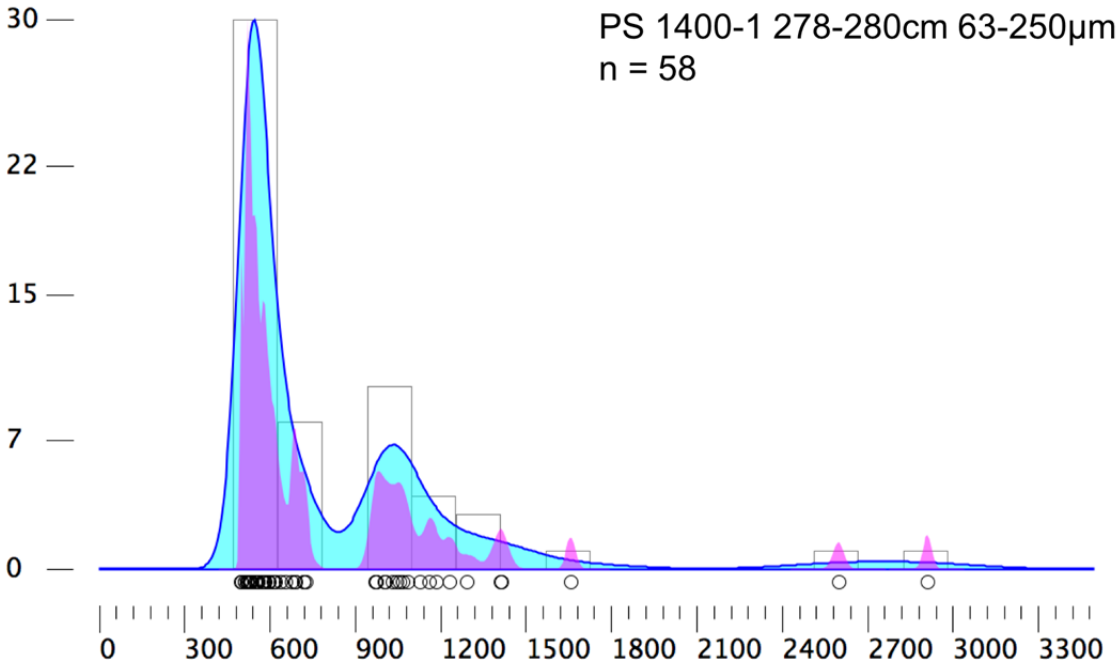





PS 1197-2 320-322cm 63-250µm
n = 142
85
63
42
21
0
0
400
800
1200
1600
2000
2400
2800
3200
3600

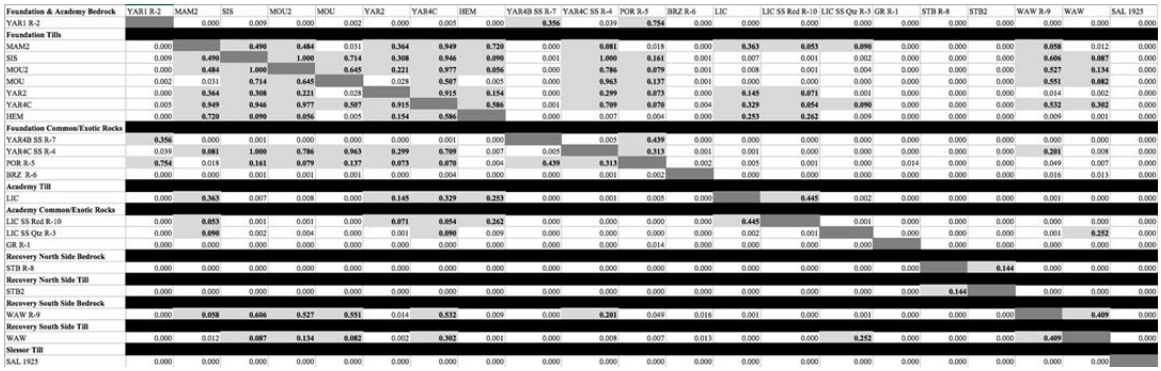

PS 1278-1 44-46cm 63-250µm
n = 137
60
45
30
15
0
0
400
800
1200
1600
2000
2400
2800
3200
3600
4000


PS 1400-1 216-218cm 63-250µm
n = 161
80
60
40
20
0
0
300
600
900
1200
1500
1800
2100
2400
2700
3000


PS 1400-1 278-280cm 63-250µm
n = 58
30
22
15
7
0
0
300
600
900
1200
1500
1800
2100
2400
2700
3000
3300

Appendix F: Kolmogorov-Smirnov (K-S) Test results

All Onshore Tills



Foundation & Academy Bedrock	YAR1 R-2	MAM2	SIS	MOU2	MOU	YAR2	YAR4C	HEM	YAR4B SS R-7	YAR4C SS R-4	POR R-5	BRZ R-6	LIC	LIC SS Red R-10	LIC SS Qtz R-3	GR R-1	STB R-8	STB2	WAW R-9	WAW	SAL 1925
YAR1 R-2		0.000	0.009	0.000	0.002	0.000	0.005	0.000	**0.356**	0.039	**0.754**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Foundation Tills																					
MAM2	0.000		**0.490**	**0.484**	0.031	**0.364**	**0.949**	**0.720**	0.000	**0.081**	0.018	0.000	**0.363**	**0.053**	**0.090**	0.000	0.000	0.000	**0.058**	0.012	0.000
SIS	0.009	**0.490**		**1.000**	**0.714**	**0.308**	**0.946**	**0.090**	0.001	**1.000**	**0.161**	0.001	0.007	0.001	0.002	0.000	0.000	0.000	**0.606**	**0.087**	0.000
MOU2	0.000	**0.484**	**1.000**		**0.645**	**0.221**	**0.977**	**0.056**	0.000	**0.786**	**0.079**	0.001	0.008	0.001	0.004	0.000	0.000	0.000	**0.527**	**0.134**	0.000
MOU	0.002	0.031	**0.714**	**0.645**		0.028	**0.507**	0.005	0.000	**0.963**	**0.137**	0.001	0.000	0.000	0.000	0.000	0.000	0.000	**0.551**	**0.082**	0.000
YAR2	0.000	**0.364**	**0.308**	**0.221**	0.028		**0.915**	**0.154**	0.000	**0.299**	**0.073**	0.000	**0.145**	**0.071**	0.001	0.000	0.000	0.000	0.014	0.002	0.000
YAR4C	0.005	**0.949**	**0.946**	**0.977**	**0.507**	**0.915**		**0.586**	0.001	**0.709**	**0.070**	0.004	**0.329**	**0.054**	**0.090**	0.000	0.000	0.000	**0.532**	**0.302**	0.000
HEM	0.000	**0.720**	**0.090**	**0.056**	0.005	**0.154**	**0.586**		0.000	0.007	0.004	0.000	**0.253**	**0.262**	0.009	0.000	0.000	0.000	0.009	0.001	0.000
Foundation Common/Exotic Rocks																					
YAR4B SS R-7	**0.356**	0.000	0.001	0.000	0.000	0.000	0.001	0.000		0.005	**0.439**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YAR4C SS R-4	0.039	**0.081**	**1.000**	**0.786**	**0.963**	**0.299**	**0.709**	0.007	0.005		**0.313**	0.001	0.001	0.000	0.000	0.000	0.000	0.000	**0.201**	0.008	0.000
POR R-5	**0.754**	0.018	**0.161**	**0.079**	**0.137**	**0.073**	**0.070**	0.004	**0.439**	**0.313**		0.002	0.005	0.001	0.000	0.014	0.000	0.000	0.049	0.007	0.000
BRZ R-6	0.000	0.000	0.001	0.001	0.001	0.000	0.004	0.000	0.000	0.001	0.002		0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.013	0.000
Academy Till																					
LIC	0.000	**0.363**	0.007	0.008	0.000	**0.145**	**0.329**	**0.253**	0.000	0.001	0.005	0.000		**0.445**	0.002	0.000	0.000	0.000	0.001	0.000	0.000
Academy Common/Exotic Rocks																					
LIC SS Red R-10	0.000	**0.053**	0.001	0.001	0.000	**0.071**	**0.054**	**0.262**	0.000	0.000	0.000	0.000	**0.445**		0.001	0.000	0.000	0.000	0.000	0.000	0.000
LIC SS Qtz R-3	0.000	**0.090**	0.002	0.004	0.000	0.001	**0.090**	0.009	0.000	0.000	0.000	0.000	0.002	0.001		0.000	0.000	0.000	0.001	**0.252**	0.000
GR R-1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000
Recovery North Side Bedrock																					
STB R-8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		**0.144**	0.000	0.000	0.000
Recovery North Side Till																					
STB2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.144**		0.000	0.000	0.000
Recovery South Side Bedrock																					
WAW R-9	0.000	**0.058**	**0.606**	**0.527**	**0.551**	0.014	**0.532**	0.009	0.000	**0.201**	0.049	0.016	0.001	0.000	0.001	0.000	0.000	0.000		**0.409**	0.000
Recovery South Side Till																					
WAW	0.000	0.012	**0.087**	**0.134**	**0.082**	0.002	**0.302**	0.001	0.000	0.008	0.007	0.013	0.000	0.000	**0.252**	0.000	0.000	0.000	**0.409**		0.000
Slesser Till																					
SAL 1925	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

All Offshore Tills

	PS 1423-2 217-219cm	PS 1423-2 262-264cm	PS 1197-2 320-322cm	PS 1278-1 44-46cm	PS 1216-1 35-36cm	PS 1400-1 216-218cm	PS 1400-1 278-280cm
PS 1423-2 217-219cm		0.000	0.000	0.000	0.002	0.000	0.000
PS 1423-2 262-264cm	0.030		0.000	0.000	0.022	0.000	0.000
PS 1197-2 320-322cm	0.000	0.000		0.005	**0.106**	**0.135**	**0.314**
PS 1278-1 44-46cm	0.000	0.000	0.005		**0.277**	**0.107**	**0.989**
PS 1216-1 35-36cm	0.002	0.022	**0.106**	**0.277**		**0.073**	**0.192**
PS 1400-1 216-218cm	0.000	0.000	**0.135**	**0.107**	**0.073**		**0.762**
PS 1400-1 278-280cm	0.000	0.000	**0.314**	**0.989**	**0.192**	**0.762**	

PS 1423-2 217-219 cm vs. Onshore Tills

	PS 1423-2 217-219cm	Foundation 1	Foundation 2	Academy	Recovery	Slessor	Institute
PS 1423-2 217-219cm		0.000	0.000	0.000	0.000	0.000	0.000
Foundation 1	0.000		**0.163**	0.000	0.000	0.000	0.000
Foundation 2	0.000	**0.163**		0.041	0.000	0.000	0.000
Academy	0.000	0.000	0.041		0.000	0.000	0.000
Recovery	0.000	0.000	0.000	0.000		0.000	0.000
Slessor	0.000	0.000	0.000	0.000	0.000		0.000
Institute	0.000	0.000	0.000	0.000	0.000	0.000	

PS 1423-2 262-264 cm vs. Onshore Tills

	PS 1423-2 262-264cm	Foundation 1	Foundation 2	Academy	Recovery	Slessor	Institute
PS 1423-2 262-264cm		0.000	0.000	0.000	0.000	0.000	0.000
Foundation 1	0.000		**0.163**	0.000	0.000	0.000	0.000
Foundation 2	0.000	**0.163**		0.041	0.000	0.000	0.000
Academy	0.000	0.000	0.041		0.000	0.000	0.000
Recovery	0.000	0.000	0.000	0.000		0.000	0.000
Slessor	0.000	0.000	0.000	0.000	0.000		0.000
Institute	0.000	0.000	0.000	0.000	0.000	0.000	

PS 1197-2 320-322 cm vs. Onshore Tills

	PS 1197-2 320-322cm	Foundation 1	Foundation 2	Academy	Recovery	Slessor	Institute
PS 1197-2 320-322cm		0.003	0.000	0.000	0.000	0.000	0.000
Foundation 1	0.003		**0.163**	0.000	0.000	0.000	0.000
Foundation 2	0.000	**0.163**		0.041	0.000	0.000	0.000
Academy	0.000	0.000	0.041		0.000	0.000	0.000
Recovery	0.000	0.000	0.000	0.000		0.000	0.000
Slessor	0.000	0.000	0.000	0.000	0.000		0.000
Institute	0.000	0.000	0.000	0.000	0.000	0.000	

PS 1278-1 44-46 cm vs. Onshore Tills

	PS 1278-1 44-46cm	Foundation 1	Foundation 2	Academy	Recovery	Slessor	Institute
PS 1278-1 44-46cm		**0.513**	**0.768**	**0.285**	0.000	0.000	0.000
Foundation 1	**0.513**		**0.166**	0.000	0.000	0.000	0.000
Foundation 2	**0.768**	**0.166**		0.038	0.000	0.000	0.000
Academy	**0.285**	0.000	0.038		0.000	0.000	0.000
Recovery	0.000	0.000	0.000	0.000		0.000	0.000
Slessor	0.000	0.000	0.000	0.000	0.000		0.000
Institute	0.000	0.000	0.000	0.000	0.000	0.000	

PS 1216-1 35-36 cm vs. Onshore Tills

	PS 1216-1 35-36cm	Foundation 1	Foundation 2	Academy	Recovery	Slessor	Institute
PS 1216-1 35-36cm		**0.118**	**0.178**	**0.098**	**0.874**	0.000	**0.136**
Foundation 1	**0.118**		**0.164**	0.000	0.000	0.000	0.000
Foundation 2	**0.178**	**0.164**		0.040	0.000	0.000	0.000
Academy	**0.098**	0.000	0.040		0.000	0.000	0.000
Recovery	**0.874**	0.000	0.000	0.000		0.000	0.000
Slessor	0.000	0.000	0.000	0.000	0.000		0.000
Institute	**0.136**	0.000	0.000	0.000	0.000	0.000	

PS 1400-1 216-218 cm vs. Onshore Tills

	PS 1400-1 216-218cm	Foundation 1	Foundation 2	Academy	Recovery	Slessor	Institute
PS 1400-1 216-218cm		**0.131**	0.008	0.001	0.000	0.000	0.000
Foundation 1	**0.131**		**0.163**	0.000	0.000	0.000	0.000
Foundation 2	0.008	**0.163**		0.041	0.000	0.000	0.000
Academy	0.001	0.000	0.041		0.000	0.000	0.000
Recovery	0.000	0.000	0.000	0.000		0.000	0.000
Slessor	0.000	0.000	0.000	0.000	0.000		0.000
Institute	0.000	0.000	0.000	0.000	0.000	0.000	

PS 1400-1 278-280 cm vs. Onshore Tills

	PS 1400-1 278-280cm	Foundation 1	Foundation 2	Academy	Recovery	Slessor	Institute
PS 1400-1 278-280cm		**0.998**	**0.886**	**0.199**	0.000	0.000	0.000
Foundation 1	**0.998**		**0.163**	0.000	0.000	0.000	0.000
Foundation 2	**0.886**	**0.163**		0.041	0.000	0.000	0.000
Academy	**0.199**	0.000	0.041		0.000	0.000	0.000
Recovery	0.000	0.000	0.000	0.000		0.000	0.000
Slessor	0.000	0.000	0.000	0.000	0.000		0.000
Institute	0.000	0.000	0.000	0.000	0.000	0.000	

Appendix G: Overlap-Similarity Test for offshore tills

All Offshore Tills

Overlap							
PS 1400-1 278-280cm	PS 1400-1 278-280cm						
PS 1197 320-322cm	0.605	PS 1197 320-322cm					
PS 1278-1 44-46cm	0.613	0.798	PS 1278-1 44-46cm				
PS 1423-2 217-219cm	0.604	0.688	0.619	PS 1423-2 217-219cm			
PS 1423-2 262-264cm	0.571	0.678	0.657	0.664	PS 1423-2 262-264cm		
PS 1216 35-36cm	0.331	0.469	0.469	0.467	0.467	PS-1216 35-36cm	
PS 1400-1 216-218cm	0.734	0.693	0.644	0.592	0.628	0.407	PS 1400-1 216-218cm
Similarity							
PS 1400-1 278-280cm	PS 1400-1 278-280cm						
PS 1197 320-322cm	0.816	PS 1197 320-322cm					
PS 1278-1 44-46cm	0.842	0.839	PS 1278-1 44-46cm				
PS 1423-2 217-219cm	0.440	0.509	0.470	PS 1423-2 217-219cm			
PS 1423-2 262-264cm	0.643	0.658	0.674	0.745	PS 1423-2 262-264cm		
PS 1216 35-36cm	0.462	0.531	0.563	0.349	0.423	PS-1216 35-36cm	
PS 1400-1 216-218cm	0.849	0.826	0.849	0.493	0.691	0.486	PS 1400-1 216-218cm

PS 1423-2 217-219 cm vs. Onshore Tills

Overlap							
PS 1423-2 217-219cm	PS 1423-2 217-219cm						
Foundation 1	0.638	Foundation 1					
Foundation 2	0.612	0.865	Foundation 2				
Academy	0.670	0.785	0.764	Academy			
Recovery	0.568	0.795	0.829	0.758	Recovery		
Slessor	0.336	0.500	0.523	0.465	0.651	Slessor	
Institute	0.614	0.832	0.789	0.723	0.845	0.684	Institute
Similarity							
PS 1423-2 217-219cm	PS 1423-2 217-219cm						
Foundation 1	0.458	Foundation 1					
Foundation 2	0.450	0.937	Foundation 1				
Academy	0.411	0.909	0.915	Academy			
Recovery	0.474	0.760	0.783	0.731	Recovery		
Slessor	0.168	0.182	0.230	0.156	0.500	Slessor	
Institute	0.455	0.865	0.878	0.881	0.728	0.202	Institute

PS 1423-2 262-264 cm vs. Onshore Tills

Overlap							
PS 1423-2 262-264cm	PS 1423-2 262-264cm						
Foundation 1	0.705	Foundation 1					
Foundation 2	0.716	0.865	Foundation 2				
Academy	0.666	0.785	0.764	Academy			
Recovery	0.665	0.795	0.829	0.758	Recovery		
Slessor	0.538	0.500	0.523	0.465	0.651	Slessor	
Institute	0.760	0.832	0.789	0.723	0.845	0.684	Institute
Similarity							
PS 1423-2 262-264cm	PS 1423-2 262-264cm						
Foundation 1	0.681	Foundation 1					
Foundation 2	0.686	0.937	Foundation 2				
Academy	0.658	0.909	0.915	Academy			
Recovery	0.628	0.760	0.783	0.731	Recovery		
Slessor	0.237	0.182	0.230	0.156	0.500	Slessor	
Institute	0.650	0.865	0.878	0.881	0.728	0.202	Institute

PS 1197-2 320-322 cm vs. Onshore Tills

Overlap							
PS 1197-2 320-322cm	PS 1197-2 320-322cm						
Foundation 1	0.734	Foundation 1					
Foundation 2	0.757	0.865	Foundation 2				
Academy	0.804	0.785	0.764	Academy			
Recovery	0.763	0.795	0.829	0.758	Recovery		
Slessor	0.484	0.500	0.523	0.465	0.651	Slessor	
Institute	0.729	0.832	0.789	0.723	0.845	0.684	Institute
Similarity							
PS 1197-2 320-322cm	PS 1197-2 320-322cm						
Foundation 1	0.855	Foundation 1					
Foundation 2	0.847	0.937	Foundation 2				
Academy	0.816	0.909	0.915	Academy			
Recovery	0.687	0.760	0.783	0.731	Recovery		
Slessor	0.143	0.182	0.230	0.156	0.500	Slessor	
Institute	0.772	0.865	0.878	0.881	0.728	0.202	Institute

PS 1278-1 44-46 cm vs. Onshore Tills

Overlap							
PS 1278 44-46cm	PS 1278 44-46cm						
Foundation 1	0.729	Foundation 1					
Foundation 2	0.715	0.865	Foundation 2				
Academy	0.720	0.785	0.764	Academy			
Recovery	0.772	0.795	0.829	0.758	Recovery		
Slessor	0.514	0.500	0.523	0.465	0.651	Slessor	
Institute	0.757	0.832	0.789	0.723	0.845	0.684	Institute
Similarity							
PS 1278 44-46cm	PS 1278 44-46cm						
Foundation 1	0.888	Foundation 1					
Foundation 2	0.876	0.937	Foundation 2				
Academy	0.852	0.909	0.915	Academy			
Recovery	0.778	0.760	0.783	0.731	Recovery		
Slessor	0.247	0.182	0.230	0.156	0.500	Slessor	
Institute	0.837	0.865	0.878	0.881	0.728	0.202	Institute

PS 1216-1 35-36 cm vs. Onshore Tills

Overlap							
PS 1216-1 35-36cm	PS 1216-1 35-36cm						
Foundation 1	0.439	Foundation 1					
Foundation 2	0.428	0.865	Foundation 2				
Academy	0.495	0.785	0.764	Academy			
Recovery	0.424	0.795	0.829	0.758	Recovery		
Slessor	0.401	0.500	0.523	0.465	0.651	Slessor	
Institute	0.404	0.832	0.789	0.723	0.845	0.684	Institute
Similarity							
PS 1216-1 35-36cm	PS 1216-1 35-36cm						
Foundation 1	0.542	Foundation 1					
Foundation 2	0.525	0.937	Foundation 2				
Academy	0.465	0.909	0.915	Academy			
Recovery	0.654	0.760	0.783	0.731	Recovery		
Slessor	0.357	0.182	0.230	0.156	0.500	Slessor	
Institute	0.484	0.865	0.878	0.881	0.728	0.202	Institute

PS 1400-1 216-218 cm vs. Onshore Tills

Overlap							
PS 1400-1 216-218cm	PS 1400-1 216-218cm						
Foundation 1	0.661	Foundation 1					
Foundation 2	0.644	0.865	Foundation 2				
Academy	0.698	0.785	0.764	Academy			
Recovery	0.556	0.795	0.829	0.758	Recovery		
Slessor	0.260	0.500	0.523	0.465	0.651	Slessor	
Institute	0.590	0.832	0.789	0.723	0.845	0.684	Institute
Similarity							
PS 1400-1 216-218cm	PS 1400-1 216-218cm						
Foundation 1	0.877	Foundation 1					
Foundation 2	0.864	0.937	Foundation 2				
Academy	0.856	0.909	0.915	Academy			
Recovery	0.694	0.760	0.783	0.731	Recovery		
Slessor	0.123	0.182	0.230	0.156	0.500	Slessor	
Institute	0.790	0.865	0.878	0.881	0.728	0.202	Institute

PS 1400-1 278-280 cm vs. Onshore Tills

Overlap							
PS 1400-1 278-280cm	PS 1400-1 278-280cm						
Foundation 1	0.678	Foundation 1					
Foundation 2	0.606	0.865	Foundation 2				
Academy	0.727	0.785	0.764	Academy			
Recovery	0.529	0.795	0.829	0.758	Recovery		
Slessor	0.267	0.500	0.523	0.465	0.651	Slessor	
Institute	0.559	0.832	0.789	0.723	0.845	0.684	Institute
Similarity							
PS 1400-1 278-280cm	PS 1400-1 278-280cm						
Foundation 1	0.873	Foundation 1					
Foundation 2	0.854	0.937	Foundation 2				
Academy	0.841	0.909	0.915	Academy			
Recovery	0.658	0.760	0.783	0.731	Recovery		
Slessor	0.120	0.182	0.230	0.156	0.500	Slessor	
Institute	0.790	0.865	0.878	0.881	0.728	0.202	Institute

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Curriculum Vitae

Liana Marie Agrios

Education

August 2018 — Master of Science in Geology
Indiana University Purdue University-Indianapolis (IUPUI)
Indianapolis, IN
Master's Thesis: "Using U-Pb Dating of Detrital Zircons to Determine Major Ice Stream Flow History in the Weddell Sea Embayment, Antarctica"
Advisor: Dr. Kathy Licht

May 2014 — Bachelor of Science
Major: Geology
Minor: Environmental Science
Lafayette College
Easton, PA
Dean's List: Fall 2011 – Spring 2014
Cum Laude

Academic Experience

Teaching Experience

- IUPUI Teaching Assistant: Principles of Sedimentation and Stratigraphy (2015)
- Lafayette College Teaching Assistant: Mineralogy (2012-2013)
- Lafayette College Teaching Assistant: Introductory Geology (2012)

Lab Experience

- IUPUI Sedimentology Lab
  - Preparation of till samples for the Malvern Mastersizer 2000 laser particle size analyzer
  - Classification of pebbles from Antarctica
  - Zircon identification in thin section
  - Preparation of zircon grain mounts
- University of Illinois-Urbana Champaign
  - Operated Scanning Electron Microscope (SEM) to obtain backscattered electron (BSE) imaging of zircons with
  - Operated Scanning Electron Microscope/Energy-dispersive X-ray spectroscopy (SEM/EDS) to obtain elemental maps
- Arizona LaserChron Center
  - Operated the Element 2 (E2) ICPMS to obtain U-Pb ratios of detrital zircons
- Lamont-Doherty Earth Observatory

    - Conducted heavy liquid mineral separation of zircons using Methylene Iodide
- Lafayette College
    - Used wet saw, thin section grinders, and polishing consoles to create petrographic thin sections of rock samples

Field Experience

- Montclair State University: National Science Foundation Research Experience for Undergraduates: 8-week research experience assessing pedogenesis in glacial sediments, Sussex County, NJ (Summer 2013)
- Lafayette College Structural Geology: 1-week field course collecting data used to create geologic map, stratigraphic column, structure sections, and report, Sheep Mountain, Bighorn Basin, WY (Oct. 2012)
- Lafayette College: The Geological Evolution of the Hawaiian Islands: 3-week field camp attendee in Hawaii (Jan. 2012)
- Lafayette College: The Geology of the National Parks in the Western United States: 3-week field camp attendee in AZ and UT (May-June 2011)

Professional Presentations

- GSA: Using U-Pb Detrital Zircon Ages to Distinguish Ice Stream Tills in the Weddell Sea Embayment, Antarctica, Pittsburgh, PA (March 2017)
- AGU: Using U-Pb Detrital Zircon Geochronology to Study Ice Streams in the Weddell Sea Embayment, Antarctica, San Francisco, CA (Dec. 2016)
- GSA: Using U-Pb Detrital Zircon Geochronology to Study Ice Streams in the Weddell Sea Embayment, Antarctica, Denver, CO (Sept. 2016)
- Diplomacy Lab Wonk Tank Competition and Project Fair: Freshwater Security in the Arctic, Washington DC (April 2016)
- GSA: A Provenance Analysis of Passaic Formation Fanglomerate Facies Adjacent to the Ramapo Fault, Newark Basin, Lancaster, PA (March 2014)
- GSA: Field and Laboratory Methods Used to Assess Late Quaternary Pedogenesis, Northwest New Jersey, USA, Denver, CO (Oct. 2013)

Publications

- *The Professional Geologist:* Coastal Resiliency in New York City (Dec. 2016)

Employment

- ***Staff Geologist,* ARM Group, Inc.**
  April 2018 – Present
  - Assist with collecting and evaluating geological, hydrogeological, and remediation system data in both field and office settings
  - Preparation of technical correspondence, technical reports, work plans, and project specifications
  - Coordinating with subcontractors

- ***Graduate Research Assistant*, IUPUI**
  August 2015 – Nov. 2017
  - Performed sample preparation, collection, and analysis of large datasets for geochemical fingerprinting of Antarctic glacial till
  - Identified, catalogued, and managed more than 2500 Antarctic rock samples; analyzed and managed ~6000 zircons for isotopic analysis (U/Pb) using LA-ICPMS; imaged ~1000 zircons with SEM/EDS

- ***Critical Issues Intern*, American Geosciences Institute (AGI)**
  Summer 2016
  - Developed case studies, fact sheets, and answers to frequently asked questions on environmental topics (climate, energy, natural disasters, mineral resources, and water quality and availability) to inform policy-makers and public audiences
  - Attended Congressional hearings to report on relevant policy developments for internal networks
  - Co-managed program's social media to provide public awareness of science and technology news/policy developments and increase visibility of organization
  - Clarified complex topics for web-development to ensure current and impartial scientific communication

- ***Research Assistant,* NJ School of Conservation, NSF Research Experience for Undergraduates**
  Summer 2013
  - Conducted interdisciplinary environmental research on soil development and geomorphology in a sample location of NJ; Presented results at 2013 GSA Annual Meeting

- ***Geology Interpreter/Educator at Glacier National Park*, Geocorps America, Geological Society of America, National Park Service**
  Summer 2012
  - Served as front-line park interpreter responsible for researching, developing and presenting original programs to visiting public on geologic history and resources of park; focused on impacts of global climate change on park's glaciers, water resources, biologic communities and natural processes

- Led guided hikes, boat tours, 45-minute campground presentation, wildlife safety clinics and talks on climate change

- ***Teaching Assistant for Geology 200 (Mineralogy),*** **Lafayette College**
  Fall 2012 & Fall 2013 semesters
  - Assistant to the professor with lab preparation, explaining geological concepts during lab and field trips, and grading labs. In the absence of the professor, conducted labs independently

- ***Teaching Assistant for Intro-Geology,*** **Lafayette College**
  Spring 2012 semester
  - Assistant to the professor with lab preparation, explaining geological concepts during lab and field trips, and grading labs. In the absence of the professor, conducted labs independently

Awards

- IUPUI University Fellowship Award
- IUPUI School of Science Graduate School Council Grant
- GSA Travel Grant
- Lafayette College Departmental Honors
- Lafayette College Arthur Montgomery Geology Award
- Lafayette College Cum Laude
- Geocorps America Participant

Skills

- *Analysis/Visualization:* ArcGIS, TransCAD, QGIS, Isoplot, ERDAS Imagine, MS Office, Adobe Illustrator, InDesign, Photoshop
- *Field/Laboratory:* soil, rock, and water sampling, soil/rock identification, particle size analysis, SEM/EDS, BSE imaging, heavy liquid mineral separation, X-ray Diffractometer, Eckman Dredge, Yellow Springs Instruments, Loss on Ignition, ICP-OES, LA ICP-MS, Precision Soil Hydrometer, Flometer, thin section creation

Professional Affiliations

- Geological Society of America (GSA)
- American Geophysical Union (AGU)
- American Institute of Professional Geologists (AIPG)